

# **Final Work Plan: Investigation of Potential Contamination at the Former USDA Facility in Powhattan, Kansas**

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**Environmental Science Division**



**United States Department of Agriculture**

Work sponsored by Commodity Credit Corporation,  
United States Department of Agriculture

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by  
Applied Geosciences and Environmental Management Section  
Environmental Science Division, Argonne National Laboratory

February 2007



**United States Department of Agriculture**

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## **Notation**

AGEM	Applied Geosciences and Environmental Management
AMSL	above mean sea level
ARAR	applicable or relevant and appropriate requirement
BGL	below ground level
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CCC	Commodity Credit Corporation
CPT	cone penetrometer
EDB	ethylene dibromide (1,2-dibromoethane)
EPA	U.S. Environmental Protection Agency
ft	foot (feet)
GSI	Geotechnical Services, Inc.
IDW	investigation-derived waste
in.	inch(es)
KDHE	Kansas Department of Health and Environment
LTM	long-term monitoring
µg/L	microgram(s) per liter
µg/kg	microgram(s) per kilogram
MCL	maximum contaminant level
mg/kg	milligram(s) per kilogram
mg/L	milligram(s) per liter
mi	mile(s)
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
OSR	Off-Site Rule
ppm	part(s) per million
PVC	polyvinyl chloride
PWS	public water supply
RWD	Rural Water District
TOC	top of casing
USDA	U.S. Department of Agriculture
VOC	volatile organic compound

**Final Work Plan:  
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at the Former USDA Facility in Powhattan, Kansas**

**1 Introduction**

This *Work Plan* outlines the scope of work to be conducted to investigate the subsurface contaminant conditions at the property formerly leased by the Commodity Credit Corporation (CCC) in Powhattan, Kansas (Figure 1.1). Data obtained during this event will be used to (1) evaluate potential contaminant source areas on the property; (2) determine the vertical and horizontal extent of potential contamination; and (3) provide recommendations for future action, with the ultimate goal of assigning this site *No Further Action* status.

The planned investigation includes groundwater monitoring requested by the Kansas Department of Health and Environment (KDHE), in accordance with Section V of the Intergovernmental Agreement between the KDHE and the Farm Service Agency of the U.S. Department of Agriculture (USDA). The work is being performed on behalf of the CCC/USDA by the Environmental Science Division of Argonne National Laboratory. A nonprofit, multidisciplinary research center operated by the University of Chicago for the U.S. Department of Energy, Argonne provides technical assistance to the CCC/USDA with environmental site characterization and remediation at former CCC/USDA grain storage facilities.

Argonne issued a *Master Work Plan* (Argonne 2002) that has been approved by the KDHE. The *Master Work Plan* describes the general scope of all investigations at former CCC/USDA facilities in Kansas and provides guidance for these investigations. It should be consulted for the complete details of plans for work associated with the former CCC/USDA facility at Powhattan.

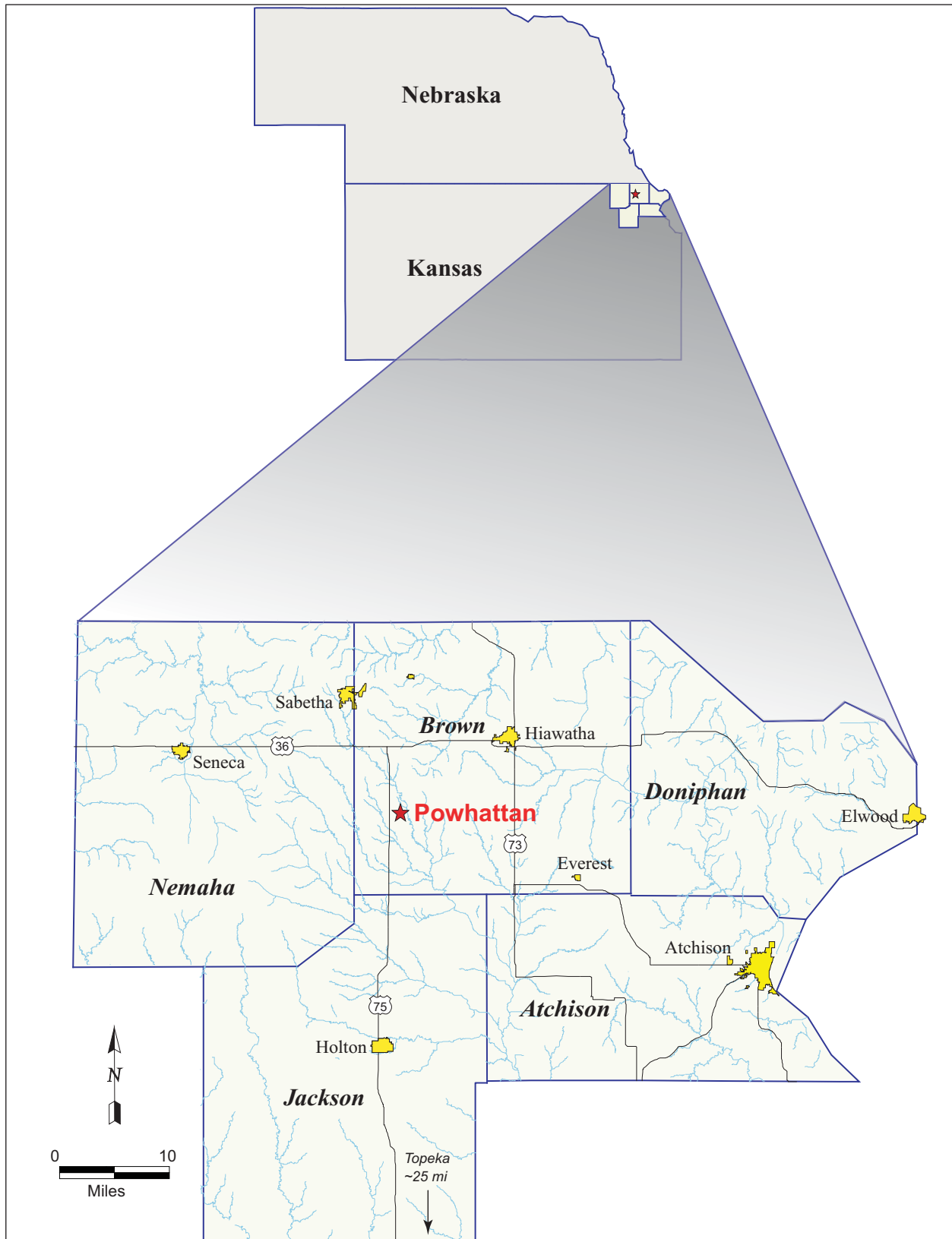


FIGURE 1.1 Location of Powhattan, Kansas.

## **2 Background and History**

### **2.1 Site Background**

Powhattan, Kansas, is a small rural town with 91 residents occupying 44 housing units (2000 Census). Located in the southwestern portion of Brown County, Powhattan is 60 mi north of Topeka, Kansas, in Section 13, Township 3 South, Range 15 East. Grain storage has occurred over the years at multiple locations in Powhattan, including the facility formerly operated by the Brown County Agricultural Conservation Association (the predecessor of the CCC/USDA). Private grain storage facilities were formerly operated by the Brown County Cooperative Association (now Ag Partners Cooperative, Inc.; the co-op; Figure 2.1).

Powhattan lies in the dissected till plains section of the central lowlands physiographic province. The subsurface is composed of till and outwash deposits associated with glacial activities that are characteristic of the Pleistocene Series. These deposits form the primary aquifer in the Powhattan area. The till consists of clay with some variable zones of silt, sand, gravel, and cobbles; the outwash contains poor to moderately sorted silt, sand, and gravel. Underlying the till and outwash is a gray shale that is part of the Admire Group.

Drilling logs from monitoring wells installed in Powhattan indicate that the upper 40–50 ft of the subsurface consists of silt and tight clay with minor zones of silt and fine sand. The lower part of this zone exhibits a higher sand content. Below this upper zone is a distinct 3- to 6-ft-thick layer of gray clay with calcareous nodules of variable size. Underlying the gray clay is 12–18 ft of yellow silty clay that grades to fine to medium sand with a clay gravel mix in the lower 5–10 ft. This lower zone, encountered at a depth of about 50–55 ft BGL (below ground level), is considered the primary water-bearing unit for the area. Beneath the aquifer, a gray shale lies at depths of approximately 61–67 ft BGL.

Ten existing monitoring wells in Powhattan (Figure 2.2) were installed by or for the KDHE during previous investigations of the Powhattan public water supply. Three wells (KDHEP-1 through KDHEP-3) were installed in 1988, and seven (MW-4 through MW-10) were installed in 1995. The well depths range from 56 ft BGL to 68.1 ft BGL. Except for MW-7, all were completed to the top of bedrock. Well MW-7 was completed at 56 ft BGL; bedrock was encountered at 66 ft BGL at this location (Table 2.1).



TABLE 2.1 Summary of analytical data for Powhattan monitoring wells and public water supply wells, 1970 to 2005.<sup>a</sup>

Well	Screen Interval (ft BGL)	Sampling Dates	Number of Sampling Events	Depth to Water (ft BGL)	Nitrate as N (mg/L)	Concentration (µg/L)			
						Carbon Tetrachloride	Chloroform	Ethylene Dibromide	Benzene
Monitoring Wells									
KDHEP-1	55.1–65.1	1988–2005	10	6.85–15.22	8.09–14.6	88–500	7.5–29	ND <sup>b</sup>	ND
KDHEP-2	58.1–68.1	1988–2005	10	7.71–17.00	10.8–18.1	ND–78	ND–4.9	ND	ND
KDHEP-3	52–62	1988–2005	10	4.39–14.85	8.1–32.5	ND–7.8	ND–0.48J <sup>c</sup>	ND	ND
MW-4	54.7–64.7	1995–2005	7	9.01–16.72	15.2–31.7	2.1–4.6	ND–0.54	ND	ND
MW-5	58–68	1995–2005	7	7.02–17.54	12.1–26.3	ND	ND	ND	ND
MW-6	56–66	1995–2005	7	6.72–14.67	9.25–19.1	ND	ND	ND	ND–4.4
MW-7	46–56	1995–2005	6	2.87–12.20	15.3–52.1	ND–180	ND–6.4	ND	ND
MW-8	55–65	1995–2005	7	10.11–18.73	24.9–39.0	1.3–6.0	ND–1.5	ND	ND
MW-9	52–62	1995–2005	7	1.52–12.30	9.9–55.8	ND	ND	ND–3.3	ND
MW-10	56–66	1995–2005	7	5.25–15.72	5.5–10.4	24–65	2.4–11.0	ND	ND
Public Water Supply Wells									
PWS 1	Unknown	1971–1988	9	Unknown	18.81–87.0	2.0–4.0	ND	ND	ND
PWS 2	Unknown	1970–1988	7	Unknown	15.53–100	ND	ND	ND	ND

<sup>a</sup> Complete data (including results for private wells) are in Appendix A, Table A.2. Analyses for some constituents were omitted in some sampling events.

<sup>b</sup> ND, contaminant not detected at the method detection limit indicated in Appendix A, Table A.2.

<sup>c</sup> Qualifier J indicates an estimated concentration below the method quantitation limit.

Static water level data from data loggers installed by Argonne in the monitoring wells in September 2005 indicate the presence of a groundwater divide that generally follows a west-to-east line along Main Street in Powhattan. Groundwater north of this line appears to be flowing northeast; south of this line the flow direction is southerly (Figures 2.3 and 2.4). Static water levels lie at approximately 6–12 ft BGL, indicating that the primary water-bearing zone encountered at approximately 50–55 ft BGL is under semi-confined or confined conditions.

The principal water source for Powhattan residents is the Brown County Rural Water District No. 2 (RWD 2). This water supply source became available in June 1995. Previously, Powhattan residents had obtained their water from public water supply wells PWS 1 and PWS 2.

Construction information for wells at Powhattan is summarized in Appendix A, Table A.1. Locations of the wells are in Appendix A, Figure A.1.

## **2.2 Previous Investigations**

### **2.2.1 Investigations of Nitrate and Carbon Tetrachloride Contamination in 1970–1996**

Records from the KDHE indicate that the Powhattan public water supply wells have been tested for nitrates since at least 1970 and for carbon tetrachloride since 1986. The history of investigations at Powhattan is summarized in Table 2.2.

The nitrate concentrations detected in groundwater at Powhattan have consistently exceeded the maximum contaminant level (MCL) of 10 mg/L for nitrate. In 1986, the KDHE conducted statewide testing of public water supplies for volatile organic chemicals (VOCs). Laboratory analytical results for samples from Powhattan wells PWS 1 and PWS 2 indicated that PWS 1 contained carbon tetrachloride at 4 µg/L (below the MCL of 5.0 µg/L for this compound). Confirmation sampling verified the initial finding (KDHE 1988b). Table 2.1 summarizes the analytical data collected to date for monitoring wells and public water supply wells at Powhattan. Complete analytical data for wells, including private wells, are in Appendix A, Table A.2.

TABLE 2.2 History of work conducted at Powhattan, Kansas.

Date	Description of Work	Reference <sup>a</sup>
1970–1988	Multiple samplings of public water supply wells demonstrated a history of nitrate contamination in the Powhattan public water supply.	KDHE 1988b (App. 2)
9 Sep 1986	In statewide testing of public water supply wells, carbon tetrachloride was detected in well PWS 1 at 4 µg/L. No contamination was detected in PWS 2.	KDHE 1988b (App. 10)
14 Oct 1986	Resampling of well PWS 1 identified carbon tetrachloride at 2 µg/L. No contamination was detected in PWS 2.	KDHE 1988b (App. 10)
7 Feb 1987	Powhattan Groundwater Contamination Site was entered into the U.S. Environmental Protection Agency (EPA) CERCLIS database.	KDHE 1988b
27 Oct 1987	<i>Potential Hazardous Waste Site: Preliminary Assessment</i> , Form 2070-12, was prepared by the KDHE for the EPA Region VII.	EPA 1987
29 Oct 1987	<i>Preliminary Assessment Conducted at Powhattan Public Water Supply</i> was issued by the KDHE.	KDHE 1987
6 Nov 1987	Carbon tetrachloride and chloroform were not detected in six soil gas samples, though 1,2-dichloroethane was. Sampling locations were not documented. Soil gas effort was abandoned.	KDHE 1988b (App. 6); Tracer 1988
29 Feb 1988	Interviews with two individuals about the use of fumigants by the Co-op and the CCC/USDA indicated that the fumigant contractor was Thomas-Demodé Fumigant Company.	KDHE 1988a (App. 5)
17 Mar 1988– 12 Apr 1988	Monitoring wells KDHEP-1, KDHEP-2, and KDHEP-3 were installed and sampled by the KDHE.	KDHE 1988b (App. 7)
1 Jun 1988	<i>Potential Hazardous Waste Site: Site Inspection Report</i> was prepared by the KDHE for the EPA Region VII.	EPA 1988a
30 Jun 1988	<i>Final Site Inspection Report</i> was prepared by the KDHE for the EPA. The report discussed 6 soil gas samples, installation of 3 monitoring wells, sampling of 16 of the 23 groundwater locations identified, and installation and sampling of 2 soil borings.	KDHE 1988b
30 Jun 1988	Hazard Ranking System score sheets were completed by the KDHE for the EPA Region VII.	EPA 1988b
14 Oct 1988	The EPA ordered the Powhattan public water supply system to comply with Safe Drinking Water Act.	EPA 1988c
13 Feb 1989	The KDHE ordered the Powhattan public water supply system to issue a public notice of nitrate violations above the maximum contaminant level and to seek a new water source.	KDHE 1989
12 Apr 1994	GeoCore Services, Inc., developed a <i>Work Plan</i> for an investigation of groundwater contamination at three sites in Brown County, Kansas.	GeoCore 1994a
20 May 1994	GeoCore conducted Phase I sampling of the existing monitoring wells and private wells.	GeoCore 1994b
15 Mar 1996	GeoCore prepared an <i>Environmental Site Investigation Report</i> for KDHE (first issued 6/20/95, revised 3/15/96). The report described installation of 7 monitoring wells, sampling of 11 wells, and soil sampling in 5 soil borings with field analysis.	GeoCore 1996

TABLE 2.2 (Cont.)

Date	Description of Work	Reference <sup>a</sup>
6–9 Oct 1998	Geotechnical Services, Inc. (GSI), conducted the initial sampling event of planned long-term monitoring (LTM). Work included sampling of 10 monitoring wells.	GSI 1998
25 Apr 2000	GSI conducted the second LTM sampling event.	GSI 2000
14–15 Jan 2002	GSI conducted the third LTM sampling event.	GSI 2002
18 May 2004	Maxim Technologies, Inc. (a TetraTech Company), conducted the fourth LTM sampling event.	Maxim 2004
7 Jun 2005	Terranext conducted the fifth LTM sampling event.	Terranext 2005
31 Oct 2005	The KDHE developed a <i>Work Plan</i> for field activities and sampling to differentiate between source areas on the Co-op and CCC/USDA properties.	KDHE 2005a
2–3 Nov 2005	Terranext conducted sampling of monitoring wells.	Terranext 2005
9 Feb 2006	The KDHE issued a <i>Supplemental Sampling Event Trip Report</i> . Work described included sampling (August 19, 2005) of soil at 0.5 ft BGL inside the large building now on former CCC/USDA property; sampling of soils from the surface to 4 ft BGL (November 1–2, 2005) for nitrate and volatile organic analyses; and soil and groundwater sampling across the site (November 7–18, 2005) with a Geoprobe.	KDHE 2006a

<sup>a</sup> Complete references are in Section 4.

In response to the detection of carbon tetrachloride, the KDHE completed a *Preliminary Assessment* and a *Final Site Inspection* for the public water supply system in 1987 and 1988 (EPA 1987, 1988a). The effort included a survey to determine the number of private wells in the area, interviews with Powhattan residents and co-op employees, a soil gas survey, and the installation of three monitoring wells (KDHEP-1, KDHEP-2, KDHEP-3; Figure 2.2). The laboratory analytical results indicated that KDHEP-1 contained carbon tetrachloride at a level of 341 µg/L (above the MCL of 5.0 µg/L). No other wells contained carbon tetrachloride above the method detection limit. Nitrate was detected in all three wells at concentrations above the MCL of 10.0 mg/L.

The KDHE concluded that a carbon tetrachloride source near KDHEP-1 had affected PWS 1 and that the resulting public health hazard could be largely corrected by providing an alternate public water supply (KDHE 1988b).

In February 1989, the KDHE ordered the Powhattan public water supply system to issue public notice of the nitrate violations above the MCL and to seek a new water source (KDHE 1989). The city was subsequently connected to the Brown County RWD 2 system.

In 1994 and 1995, the KDHE hired GeoCore Services, Inc., to conduct a groundwater investigation of the Powhattan public water supply. The work included interviewing local residents, a search of county records, groundwater sampling of existing wells, and the installation of seven permanent monitoring wells (MW-4 through MW-10) and five soil borings (GeoCore 1994a,b, 1996). Monitoring wells MW-4 through MW-10 (Figure 2.2) were installed to delineate the horizontal and vertical extent of contamination. The soil borings were advanced to collect soil samples for field analyses. The groundwater samples from various locations were found to contain carbon tetrachloride and nitrates at concentrations above the respective MCLs, while benzene was found in MW-6 at a concentration of 4.4 µg/L, below the MCL of 5.0 µg/L (GeoCore 1996). Its presence at a single location (MW-6) that was free of carbon tetrachloride and chloroform contamination suggests an independent source for the benzene contamination.

Table 2.1 summarizes the analytical results for monitoring well and public water supply well samples collected to date at Powhattan. The summary data for carbon tetrachloride are plotted in Figure 2.5. Complete analytical data for the groundwater samples from wells at Powhattan are in Appendix A, Table A.2. Analytical data for soil and soil gas samples are in Appendix B.

## **2.2.2 Groundwater Monitoring in 1998–2005**

In 1998–2005, groundwater samples were collected approximately every two years from the monitoring wells (GSI 1998, 2000, 2002; Maxim 2004; Terranext 2005). Results of the monitoring program are in Appendix A, Table A.2. The highest concentration of carbon tetrachloride detected was 500 µg/L in monitoring well KDHEP-1 during the 2002 monitoring event (Figure 2.5). Also detected during the monitoring program was ethylene dibromide (EDB) in MW-9; the maximum concentration of 3.3 µg/L (above the MCL of 0.05 µg/L for EDB) occurred in 2000. This compound is commonly found in fuel mixtures and in pesticides for grain and fruits (EPA 2006). Its presence at a single location (MW-9) that was free of carbon tetrachloride or chloroform (Table 2.1) suggests an independent source for the EDB.

### **2.2.3 KDHE Source Area Investigation in 2005**

In August–November 2005, the KDHE conducted a supplemental sampling investigation that included near-surface and subsurface soil sampling at 35 locations (Figure 2.6). Analytical results are summarized in Appendix B, Table B.4. The soil samples were collected from the surface to a depth of 12 ft BGL. The analytical results revealed only two locations (SB-05 and SB-10) with trace concentrations of carbon tetrachloride or chloroform (1.7 µg/kg to 2.3 µg/kg, all below the method quantitation limit of 5 µg/kg). Nitrate (1.2–1,100 mg/kg) was found in all of the 39 samples analyzed for nitrate and ammonia, while ammonia (up to 370 mg/kg) was found above the method detection limit of 0.1 mg/kg in 29 of these 39 samples.

The KDHE also conducted groundwater sampling in August–November 2005 at 24 locations, including the 10 monitoring wells. A Geoprobe was used for groundwater sampling at 14 additional locations. Analytical results for the monitoring well samples are in Appendix A, Table A.2. Analytical results for the groundwater samples collected with the Geoprobe are in Appendix A, Table A.3. Results for carbon tetrachloride, chloroform, and nitrate in the groundwater samples collected with the Geoprobe are displayed in Figures 2.7, 2.8, and 2.9, respectively.

The results of the 2005 investigation indicated that nitrate (Figure 2.9) and carbon tetrachloride (Figure 2.7) contamination occurs at concentrations above the respective MCLs throughout the investigation area (KDHE 2006a). The nitrate contamination is not related to CCC/USDA activities.

#### **2.2.3.1 KDHE Conclusions**

The KDHE (2006a) concluded the following:

- A former co-op employee interviewed by KDHE (1988a) indicated that carbon tetrachloride was used at the co-op's south elevator in the 1940s and 1950s, as well as at the grain bins on the former CCC/USDA property.
- Two potential source areas for carbon tetrachloride contamination were identified: the co-op south elevator and an area near the grain bin entrances on

the former CCC/USDA property (Figure 2.7 in this report; Figure 11 in KDHE [2006a]).

- The co-op is the sole potentially responsible party for contamination resulting from operations on the eastern side of its facility, including the co-op's south grain bins.
- The co-op has had use and possession of the Powhattan site since at least 1971.
- The identification of EDB at MW-9 (near the eastern boundary of the co-op's former south elevator area; Figure 2.2) but not at other locations indicates a separate source for the EDB contamination, possibly attributable to the use of chemical mixtures containing EDB at grain bins formerly located near MW-9.
- The nitrate (Figure 2.9) and ammonia (Appendix A, Table A.3) contamination identified throughout the site appears to be attributable to handling and storage practices by the co-op. The KDHE observed an ammonia tank valve to be leaking during the investigation. Historical releases and spills are also believed to have contributed to the extensive nitrate and ammonia contamination.
- Pumping of the Powhattan public water supply wells may have substantially influenced the hydraulic gradient near the site. These wells are not in service.

#### **2.2.3.2 KDHE Recommendations**

The KDHE (2006a) recommended the following:

- Additional soil and groundwater sampling at the co-op's south grain bins is necessary to fully delineate the downgradient extent of contamination from this source area.

- Additional soil and groundwater sampling is necessary near well KDHEP-1 and boring SB-10 (on the former CCC/USDA property) to evaluate the potential for a soil source in that area and to determine the downgradient extent of the carbon tetrachloride plume.
- Additional investigation may be necessary to fully identify the source for the EDB contamination.
- A Comprehensive Investigation/Corrective Action Study needs to be conducted by the CCC/USDA to determine the extent of carbon tetrachloride contamination associated with past practices on the former CCC/USDA property.
- The CCC/USDA should install additional monitoring wells west of Front Street to evaluate groundwater flow in this area.
- Ag Partners Cooperative, Inc. (the current owner of the co-op facility), should enter into an agreement under the Voluntary Cleanup Program to determine the extent of nitrate, carbon tetrachloride, and EDB contamination resulting from historical operations at the co-op facilities, as well as to evaluate potential remedial options.

### **2.3 Former CCC/USDA Facility Boundaries**

The boundaries depicted for the former CCC/USDA facility in this document differ from the boundaries shown by the KDHE (2006a). Documentation for the present interpretation of the former CCC/USDA property boundaries is in Appendix C.

The KDHE indicated (KDHE 2006b) that the boundaries depicted in the referenced KDHE (2006a) report were based solely on the areal extent of the constructed bins shown in the 1959 and 1966 aerial photographs (see Appendix C). Because the boundaries illustrated were not based on formal lease documentation, they are to be considered approximate.



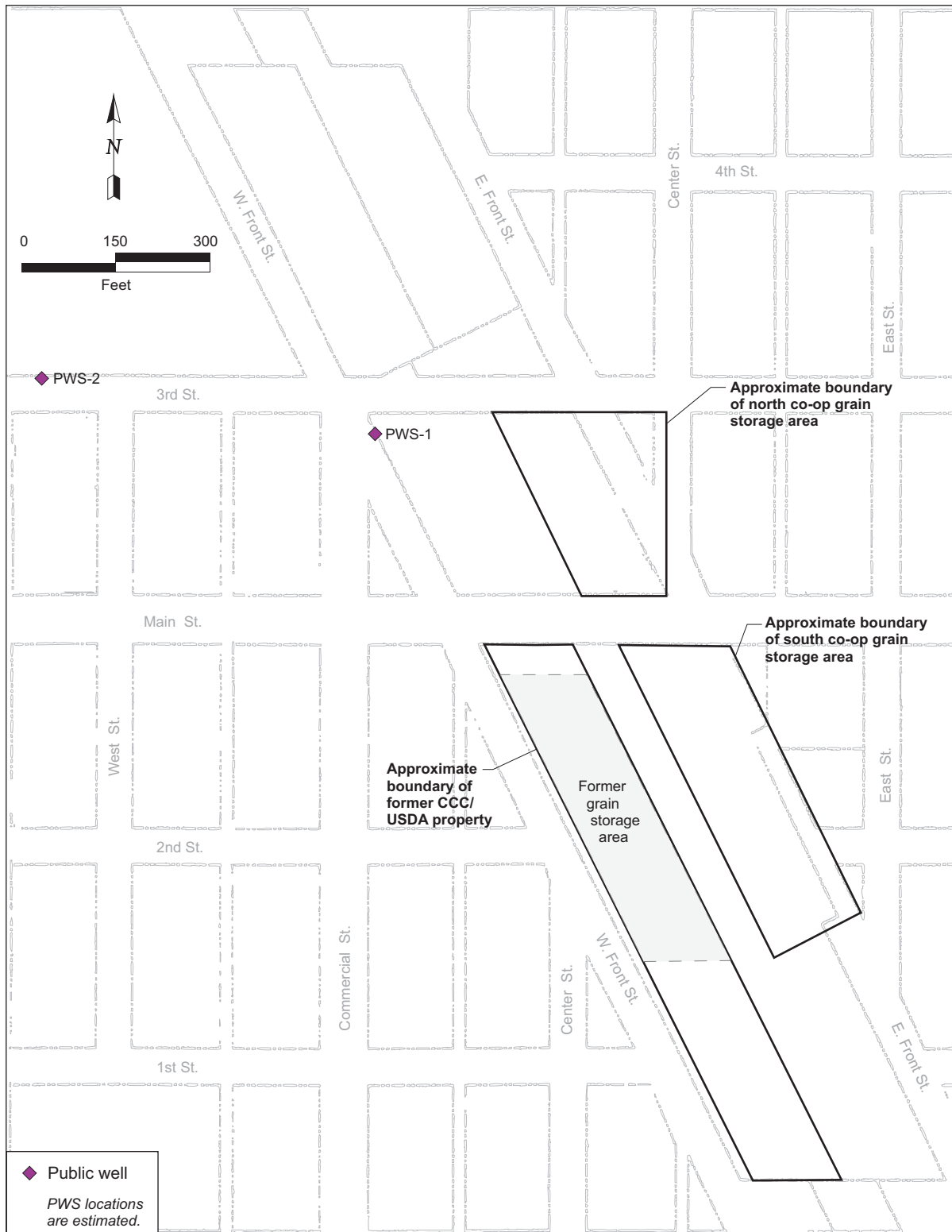


FIGURE 2.1 Locations of former grain storage facilities and public water supply wells at Powhattan.



FIGURE 2.2 Locations of monitoring wells and public water supply wells at Powhattan. Source of photograph: USDA (1966).



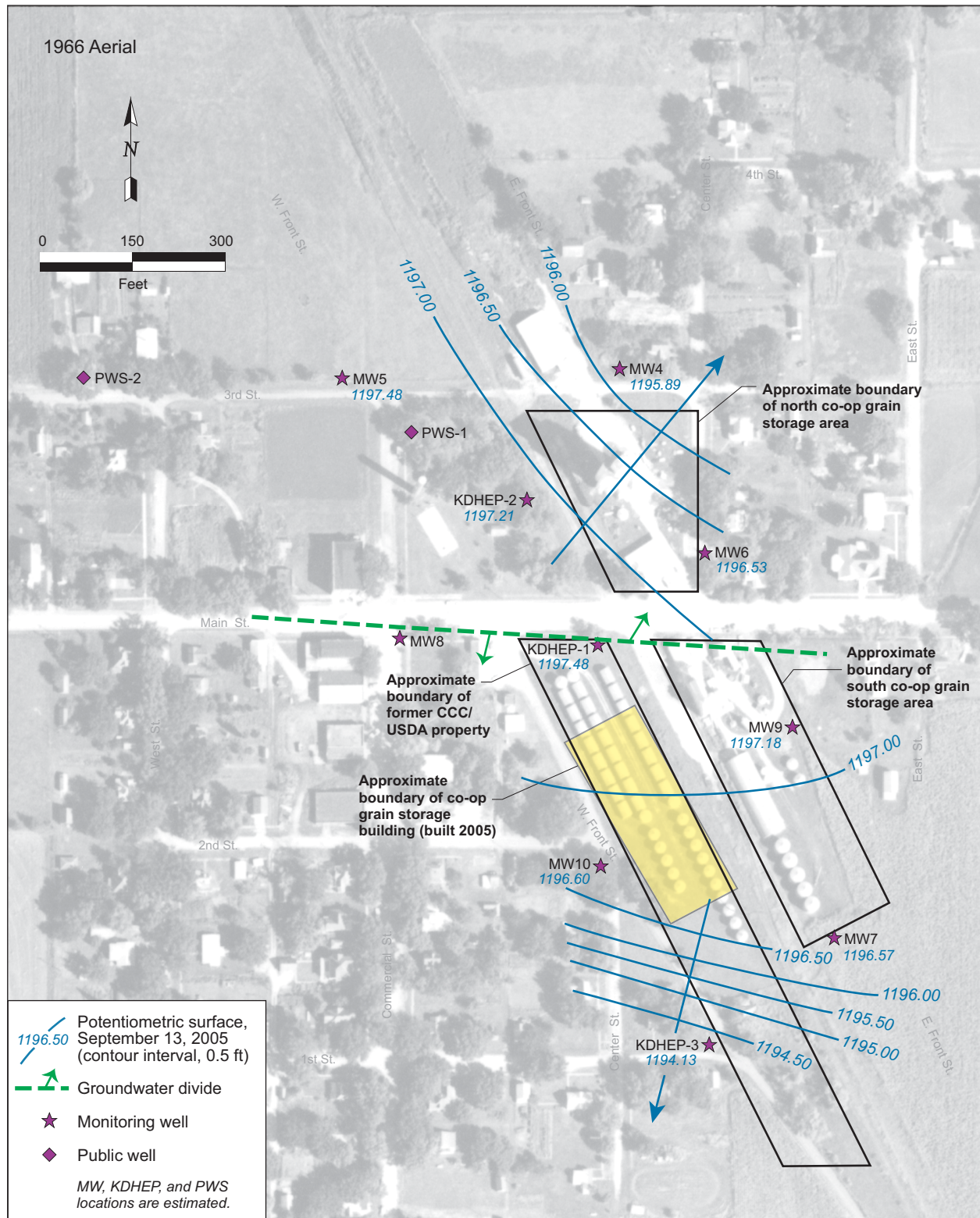


FIGURE 2.3 Groundwater levels at Powhattan on September 13, 2005, with interpreted potentiometric surface. Source of photograph: USDA (1966).



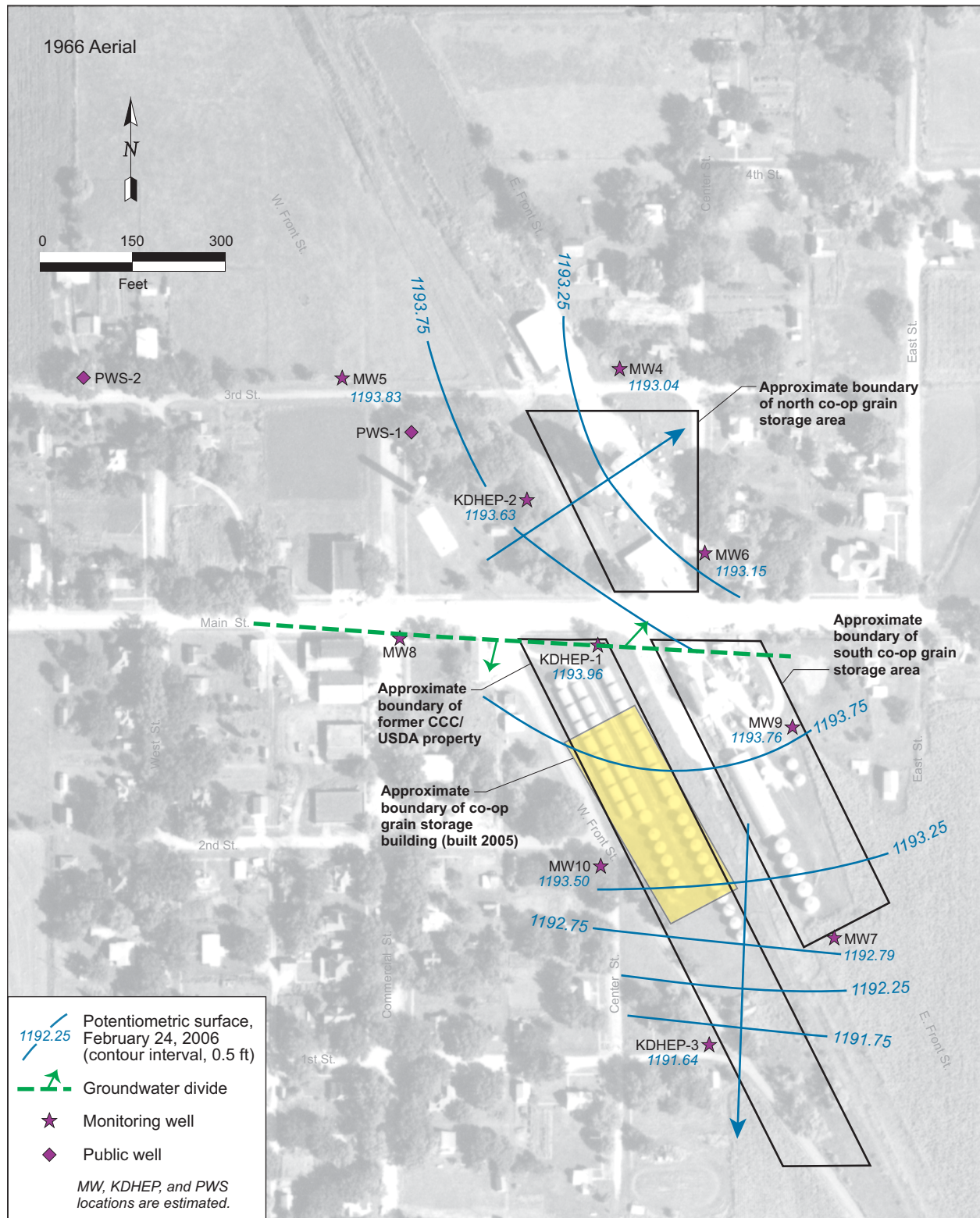


FIGURE 2.4 Groundwater levels at Powhattan on February 24, 2006, with interpreted potentiometric surface. Source of photograph: USDA (1966).



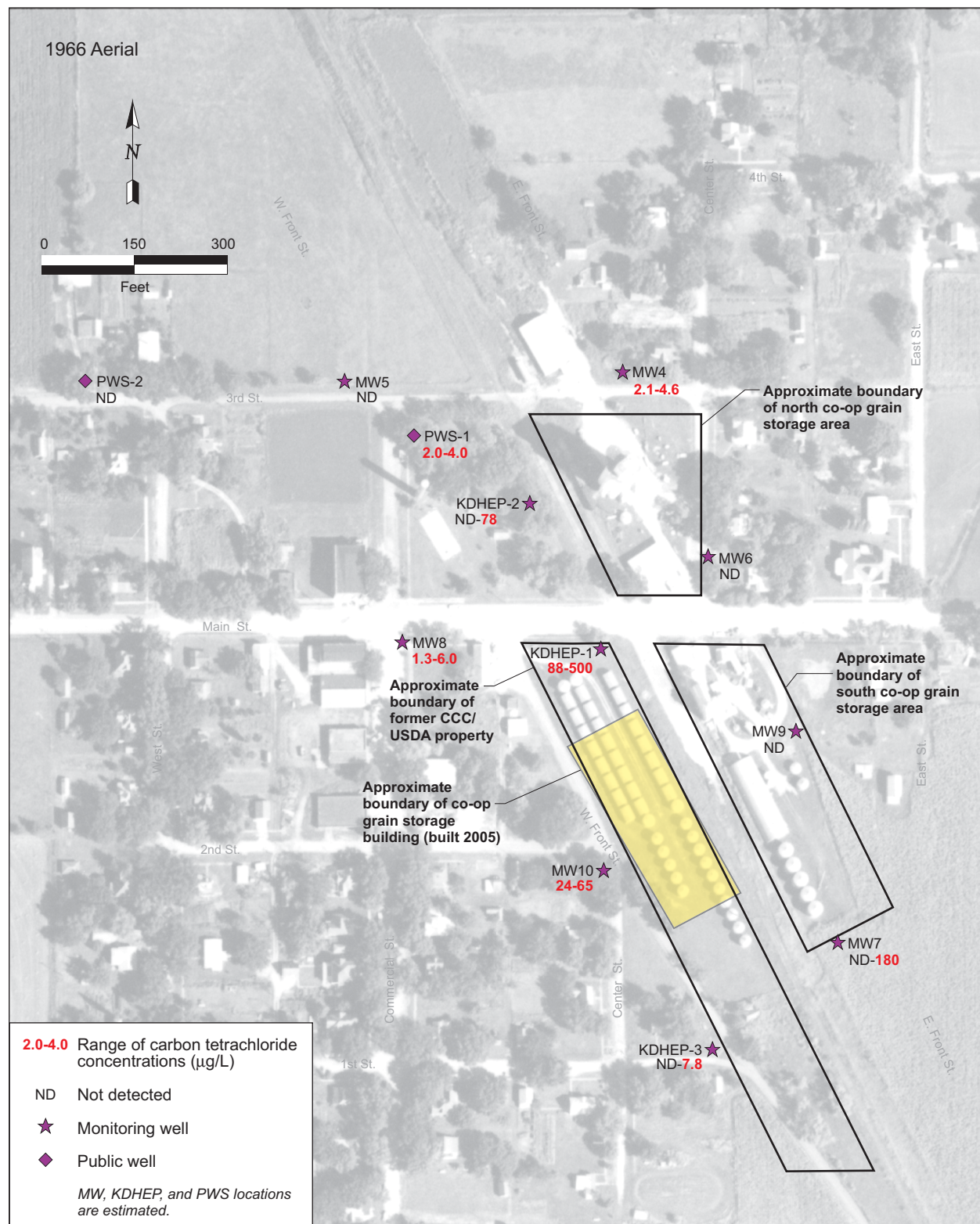


FIGURE 2.5 Historical data for carbon tetrachloride in groundwater samples from monitoring wells and public water supply wells. Source of photograph: USDA (1966).



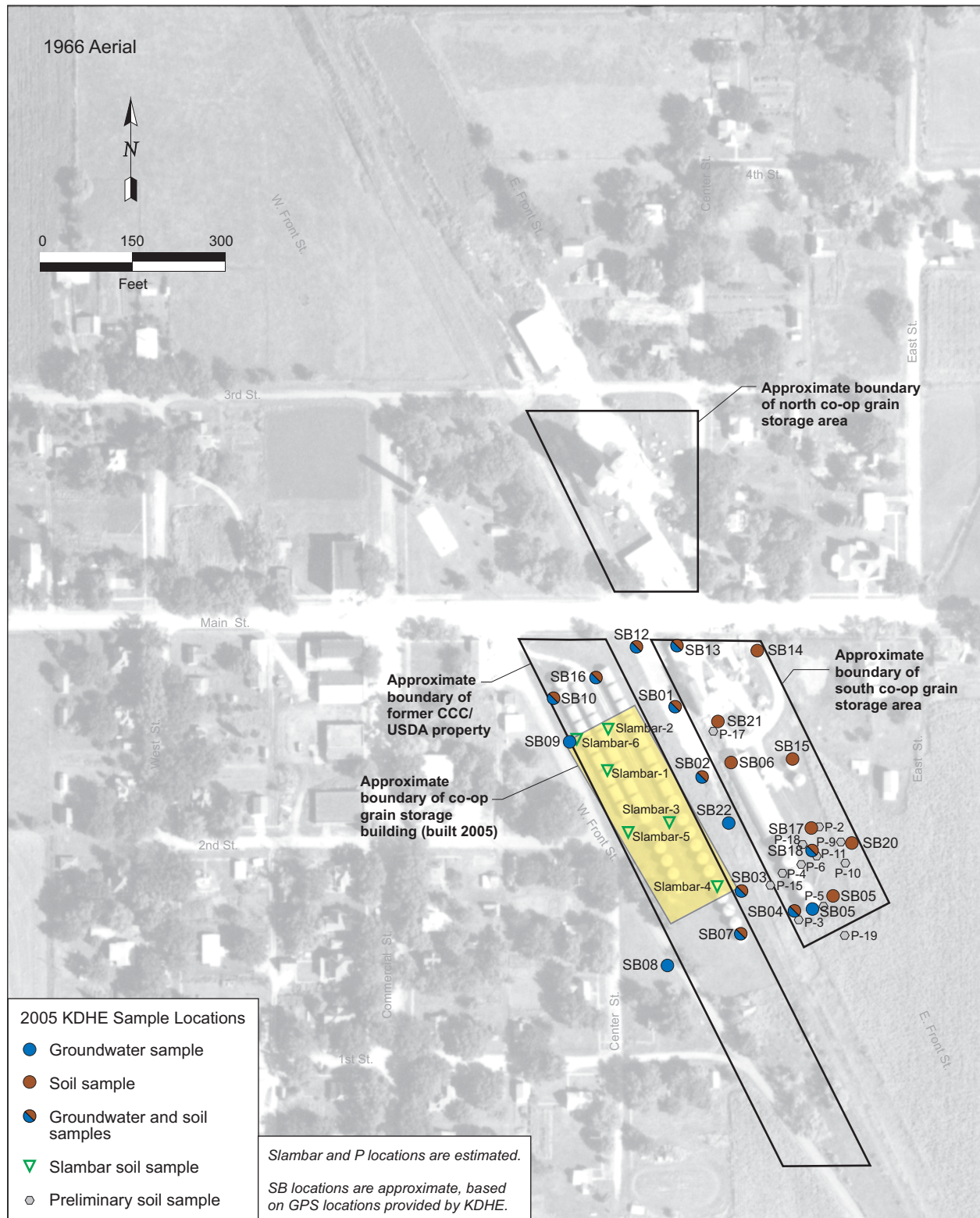


FIGURE 2.6 Locations investigated by the KDHE in 2005. Source of photograph: USDA (1966).



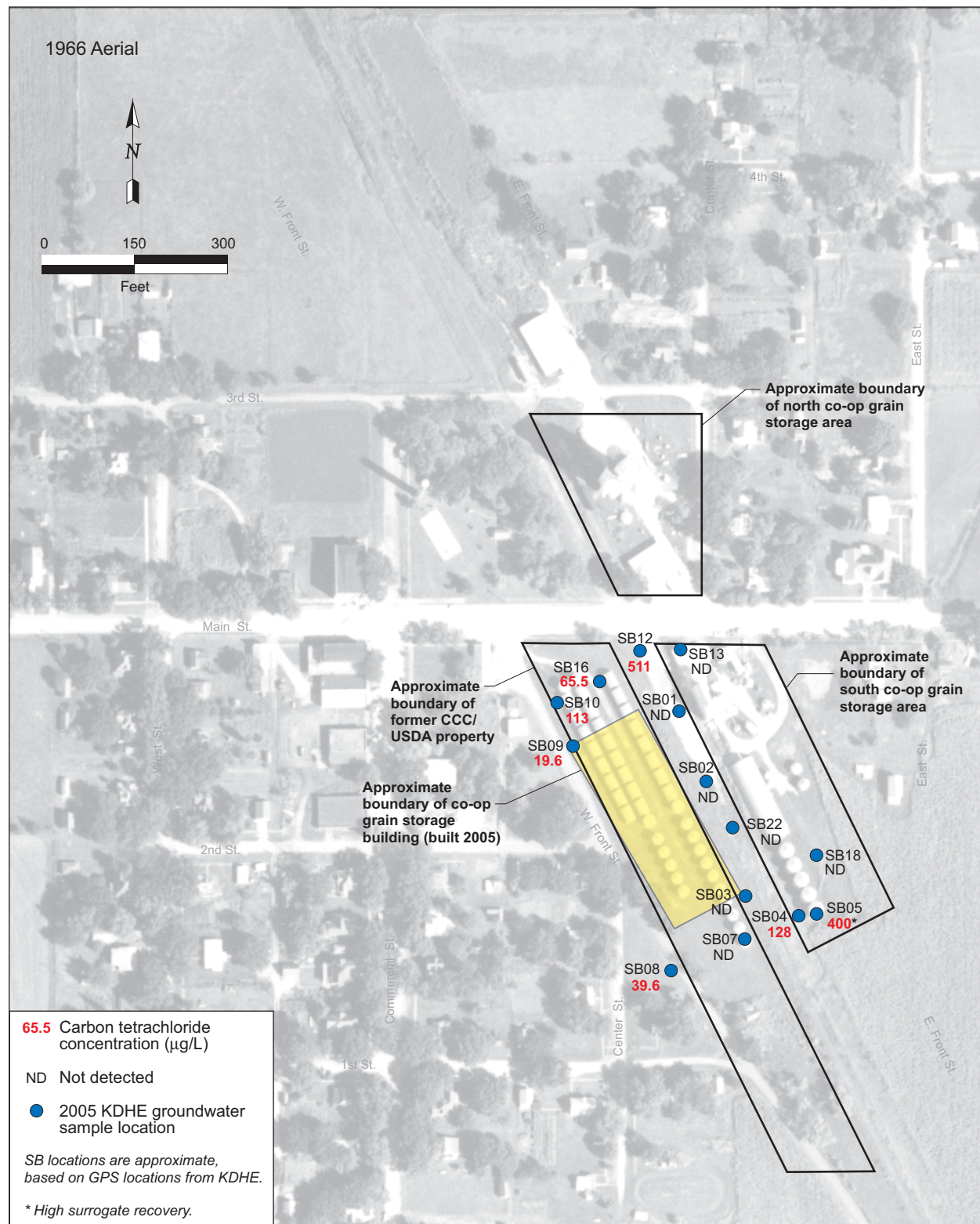


FIGURE 2.7 Carbon tetrachloride levels in groundwater samples collected by the KDHE in 2005. Source of photograph: USDA (1966).



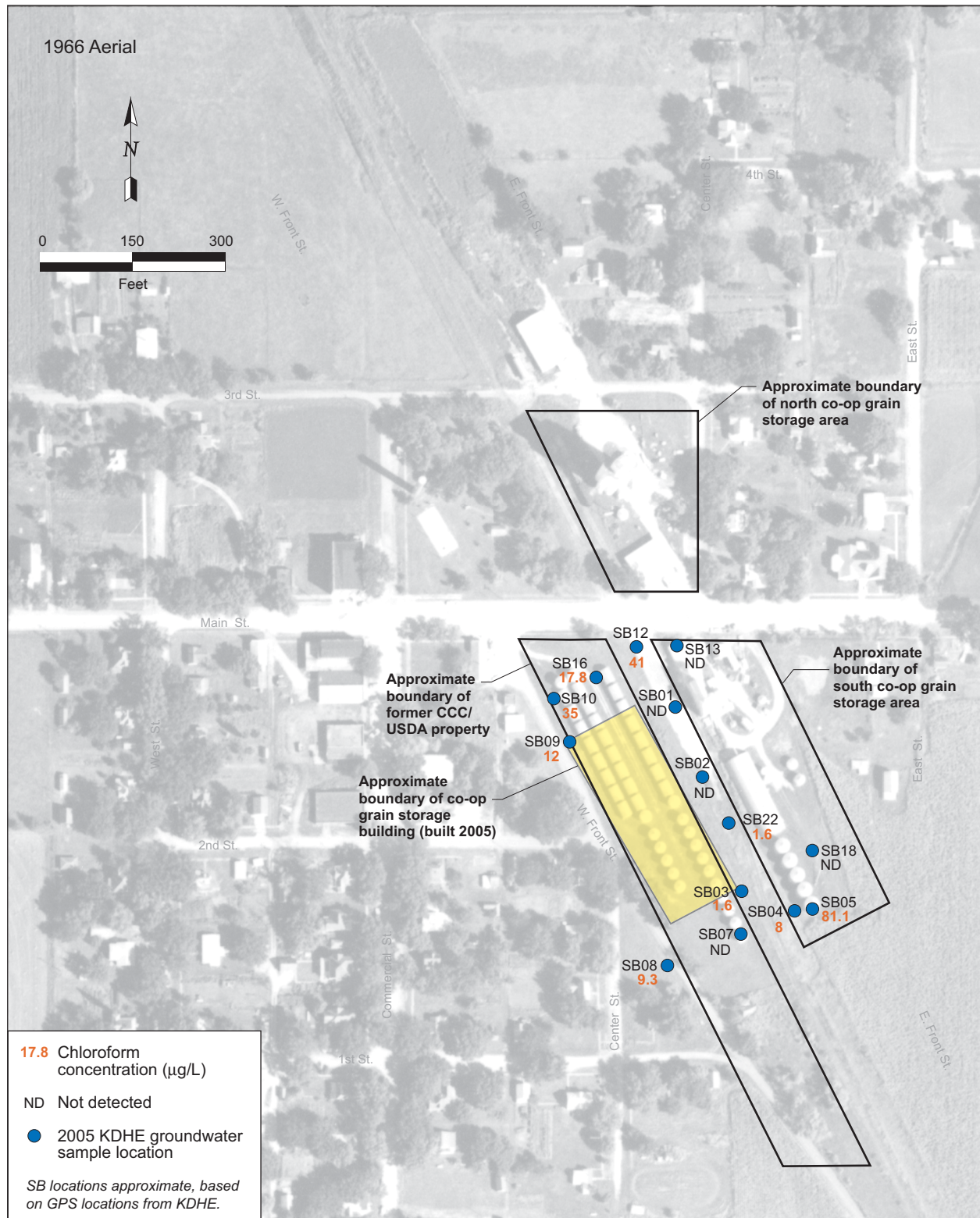


FIGURE 2.8 Chloroform levels in groundwater samples collected by the KDHE in 2005. Source of photograph: USDA (1966).



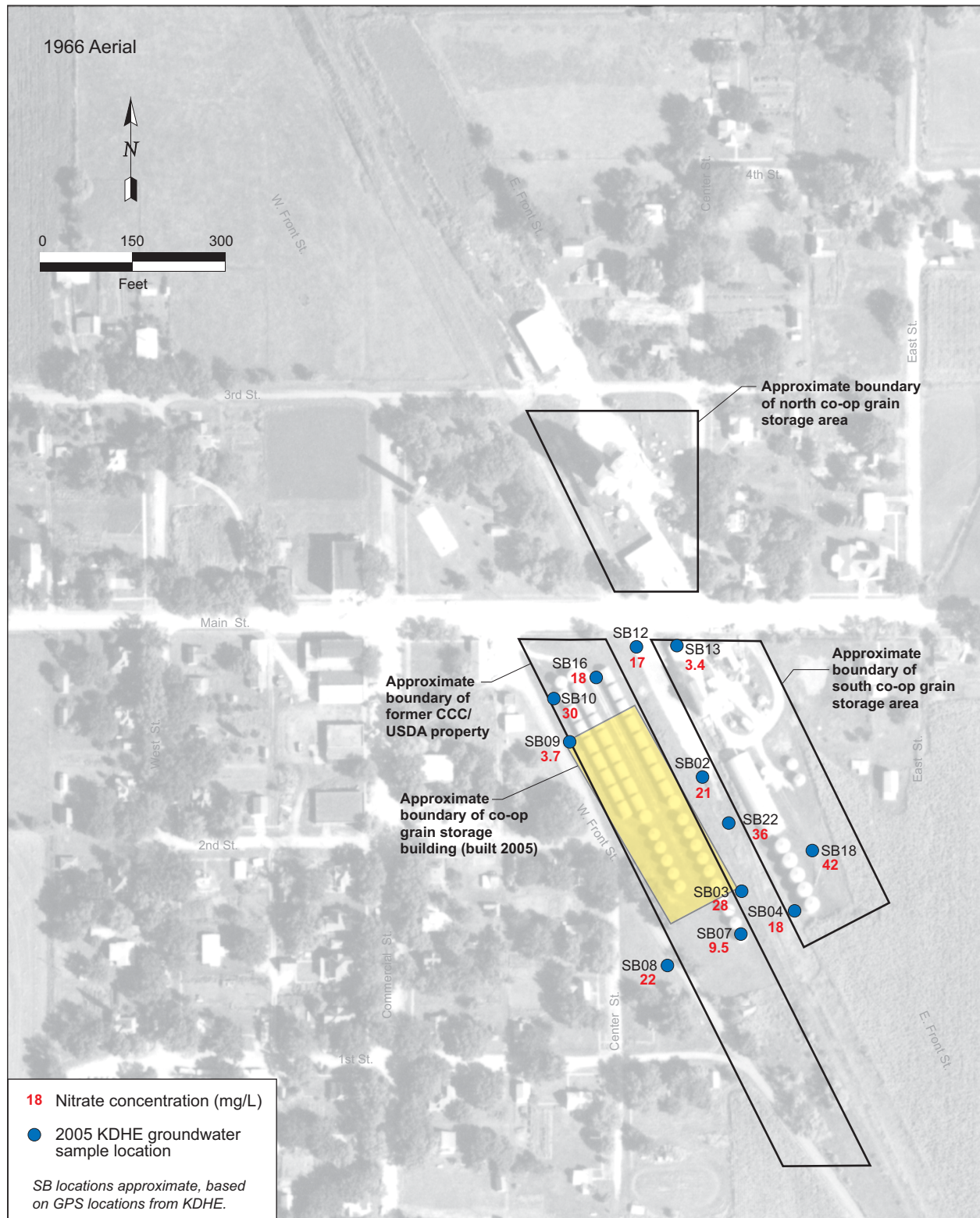


FIGURE 2.9 Nitrate levels in groundwater samples collected by the KDHE in 2005. Source of photograph: USDA (1966).

### **3 Proposed Investigation Activities**

#### **3.1 Investigation Methods**

The investigation at Powhattan will be conducted in accordance with procedures in the *Master Work Plan* (Argonne 2002), which provides details concerning investigation procedures at former CCC/USDA facilities in Kansas and has been approved by the KDHE.

Acquiring the data needed to meet the goals of this investigation will require the collection of groundwater level measurements, soil samples, and groundwater samples. The samples collected will be analyzed for organic and inorganic chemical compounds, as well as for lithologic and hydrogeologic properties.

Initial attempts to collect soil and groundwater samples will be made with the cone penetrometer (CPT). If refusal is encountered, alternate drilling methods — either hollow-stem auger or air rotary methods — will be implemented at selected locations. If alternate drilling methods must be used, the number of sampling points and locations will be modified as mutually agreed upon by the CCC/USDA and KDHE project managers.

Soil samples collected with the CPT will be taken at intervals of 5 ft or less, from the surface to the top of the semi-confined aquifer at approximately 55 ft BGL. Groundwater samples collected from the semi-confined aquifer with the CPT will be taken at 5-ft intervals from the top of the water-bearing unit to the top of bedrock. The CPT will also be used for electronic logging from ground surface to the top of bedrock. The analytical and electronic data are expected to provide information on the vertical and horizontal distribution of potential contaminants and to identify lithologic units.

After collection of the initial soil and groundwater data, the CPT may be used to install small-diameter piezometers at selected locations. The data collected during this phase of work will further delineate the vertical and horizontal extent of potential contaminant source areas associated with activities at the former CCC/USDA property and will establish additional sampling points for future monitoring. The number and location of monitoring points will be mutually agreed upon by the CCC/USDA and KDHE project managers prior to installation.

Piezometers installed by using the direct-push capabilities of the CPT will be advanced to the top of bedrock. In accordance with KDHE regulations, well installation methods will include use of the CPT to advance a 4.25-in. borehole to a depth of 20 ft BGL. From 20 ft BGL to the base of the aquifer, a 3.25-in.-diameter hole will be driven to the desired depth. Soil and groundwater sampling may be conducted during piezometer installation activities. The need to collect soil and groundwater samples during this activity will be discussed with and mutually agreed upon by the CCC/USDA and KDHE project managers. When possible, soil samples will be collected by using a continuous-core barrel.

All piezometers installed with direct-push technology as part of this investigation will be cased with 1-in.-diameter, Schedule 40 polyvinyl chloride (PVC) with approximately 5–10 ft of 0.010-in. slotted screen. Screen lengths and depths will be dictated by the aquifer thickness and the groundwater analytical data collected during the initial sampling. The KDHE project manager will be consulted before the exact screen depth intervals are determined.

Appropriate quantities of sand and grout will be used to complete each piezometer properly. A tremie pipe will be used to ensure that materials are placed properly in all annular spaces. Wells will be completed flush to the ground where necessary. All other piezometers will be completed above grade. Piezometer completions will be in accordance with KDHE regulations and with the procedures in the *Master Work Plan* (Argonne 2002).

Soil and groundwater samples will be collected in laboratory-approved containers and shipped overnight to the Applied Geosciences and Environmental Management (AGEM) Laboratory at Argonne. Before shipment, soil samples will be preserved on dry (carbon dioxide) ice, and groundwater samples will be preserved on regular (water) ice. At the AGEM Laboratory, the soil samples will be analyzed for carbon tetrachloride and chloroform by using a gas chromatograph-mass spectrometer, according to U.S. Environmental Protection Agency (EPA) Methods 5030B and 8260B (EPA 1998). Groundwater samples will be analyzed at the AGEM Laboratory for VOCs, including carbon tetrachloride and chloroform, according to EPA Method 524.2 (EPA 1995). In addition, selected groundwater samples will be analyzed for cations and anions at a certified reference laboratory, and hydrogeologic testing will be conducted on selected soil samples. Proposed tests include porosity, organic carbon content, dry bulk density, and grain size.

The waste management plan for the work at Powhattan is in Appendix D.

Argonne will develop a comprehensive report after field activities have been completed and the data have been received and evaluated. The report will include documentation and discussions of all field activities and analytical data.

### **3.2 Investigation Goals and Phases of Work**

The data collected during implementation of this work plan will be used to support recommendations for future actions, with the ultimate goal of assigning the Powhattan site *No Further Action* status, in accordance with the Intergovernmental Agreement between the KDHE and the Farm Service Agency of the USDA. The investigation goals will also include collecting adequate data to verify groundwater flow direction(s), to determine whether private or public water supply wells are influencing the flow direction, and to evaluate the potential contribution of the former CCC/USDA facility to the source of contamination.

Four phases of work are proposed to accomplish the investigation goals. Data collected during the earlier phases will be evaluated to determine whether subsequent phases are necessary. The KDHE project manager will be contacted during each phase and kept apprised of the results. Whether implementation of each phase of work is necessary will be discussed and mutually agreed upon by the CCC/USDA and KDHE project managers.

Proposed phases of work for the investigation at Powhattan are as follows:

***Phase 1:*** *Collect data from existing wells to establish the current groundwater flow direction and contaminant levels.*

***Phase 2:*** *Determine the subsurface contaminant conditions on the former CCC/USDA property.*

***Phase 3:*** *If data indicate that contamination associated with the former CCC/USDA facility has migrated off the property, determine the horizontal and vertical extent of groundwater contamination associated with any potential source areas identified on the former CCC/USDA facility.*

**Phase 4:** *If data indicate that a source area exists on the former CCC/USDA facility and that additional delineation and monitoring of the contaminant plume is warranted, install piezometers to expand the existing monitoring network and augment data collected during Phase 2 and Phase 3. Whether implementation of this phase of work is necessary will be discussed and mutually agreed upon by the CCC/USDA and KDHE project managers.*

### **3.3 Investigation Strategy and Tasks**

**Phase 1:** *Collect data from existing wells to establish the current groundwater flow direction and contaminant levels.*

- In September 2005, Argonne installed data loggers in all existing monitoring wells (KDHEP-1, KDHEP-2, KDHEP-3, MW-4, MW-5, MW-6, MW-7, MW-8, MW-9, and MW-10) at Powhattan to record water level data continuously. These data will be used to determine the groundwater flow direction.
- The current configuration of the groundwater contaminant plume will be determined by collecting groundwater samples from the existing monitoring wells and from public water supply wells PWS 1 and PWS 2.
- Groundwater samples and well usage data will be collected for selected private wells near or within the contaminant plume area. Information from previous KDHE reports, coupled with results of researching water utility bills and (if necessary) a door-to-door survey, will be used to locate the wells and determine their past and current use. Groundwater samples will be collected if appropriate. At a minimum, the following private wells will be researched (Figure A.1): 1-Abandoned, 2-Abandoned, 5-Deep Co-op, 6-Shallow Co-op, 8-City well/old PWS, 9-Garage, Novich.

- Chemical analyses will be conducted on the groundwater samples collected from the existing monitoring wells and the public water supply wells. All measurements and groundwater sampling will be conducted in accordance with procedures in the *Master Work Plan* (Argonne 2002).

***Phase 2: Determine the subsurface contaminant conditions on the former CCC/USDA property.***

The CPT will be used to collect soil and groundwater samples during this phase of the investigation (Figure 3.1). The proposed sample locations were determined from the interpretation of analytical data collected during KDHE's 2005 investigation (Figure 3.2). Samples will be collected according to procedures in the *Master Work Plan* (Argonne 2002). Activities will be as follows:

- An initial borehole (TI01; Figure 3.1) will be advanced at the former CCC/USDA facility. Electronic data collected from this initial borehole will be used to define the site lithology. This boring will also demonstrate potential depth limitations of the CPT. After collection of electronic data, soil samples will be collected continuously to the top of the saturated zone at an offset location approximately 1–2 ft from the original location. Penetration will be discontinued if refusal is met or bedrock is encountered. Additional boreholes will be advanced at this location to collect groundwater samples for chemical analyses. Groundwater samples will be collected at 5-ft intervals from the top of the semi-confined aquifer to the top of bedrock.
- Upon completion of the initial borehole (TI01), electronic data will be collected, along with soil and groundwater samples for lithologic evaluation and chemical analyses, from 12 additional locations (TI02–TI12 and TI-18; Figure 3.1). Subsequently, groundwater samples only will be collected from a maximum of 5 additional locations (TI13–TI17; Figure 3.1) at and near the former CCC/USDA facility. Figure 3.1 shows proposed locations TI01–TI18, as well as additional potential locations (unnumbered) for groundwater sampling farther from the former CCC/USDA grain storage operations. The exact number of boreholes necessary to accomplish the Phase 2 goal will be

determined as data are collected during field activities. Soil samples will be collected in boreholes TI02–TI12 and TI-18 at approximately 4-ft intervals to the top of the semi-confined aquifer at approximately 55 ft BGL. Groundwater samples will be collected in boreholes TI02–TI18 every 5 ft from the top of the semi-confined aquifer to the top of bedrock, provided that the aquifer yields enough water for sampling.

- Five additional potential sampling points are proposed inside the grain storage building constructed by the co-op in 2005 on the former CCC/USDA property. Figure 3.1 shows the proposed locations inside the co-op building. These sampling points are strategically located to improve analytical coverage across the former CCC/USDA property and to determine whether soil source areas exist where former grain bins were once located. The proposed sampling is contingent on the co-op's providing access to the building. The type of direct-push methods and equipment to be used will be determined on the basis of the physical limitations presented by operational requirements inside the building. Such limitations may be established by the co-op to minimize damage to the structure, as well as potential disruption to normal daily operations. The CCC/USDA will negotiate with the co-op for access and to minimize any negative effects resulting from this part of the investigation.
- Data collected during Phase 2 will be used to determine the appropriate placement of up to two 1-in.-diameter piezometers west of the former CCC/USDA facility. The piezometers will be installed at locations agreed upon by the KDHE and CCC/USDA project managers. Piezometers will be installed to the top of bedrock by using the direct-push capabilities of the CPT. In accordance with KDHE regulations, well installation methods will include use of the CPT to advance a 4.25-in. borehole to a depth of 20 ft BGL. From 20 ft BGL to the base of the aquifer, a 3.25-in.-diameter hole will be driven to the desired depth. Completion of the piezometers will be in accordance with KDHE regulations.
- Chemical analyses will be conducted on the soil and groundwater samples, and hydrogeologic testing and grain size analysis will be conducted on selected soil samples.

- As data are collected in the field, adjustments to the number of sampling points, sample locations, and sampling intervals may be necessary. The KDHE project manager will be contacted during field activities and kept apprised of results. Any proposed changes to the work plan will be discussed and mutually agreed upon by the CCC/USDA and KDHE project managers before the plan is modified.

***Phase 3:*** *If data indicate that contamination associated with the former CCC/USDA facility has migrated off the property, determine the horizontal and vertical extent of groundwater contamination associated with any potential source areas identified on the former CCC/USDA facility.*

The CPT will be used to collect groundwater samples during this phase of the investigation (Figure 3.1). The proposed sample locations were determined from the interpretation of analytical data collected during KDHE's 2005 investigation (Figure 3.2). Samples will be collected according to procedures in the *Master Work Plan* (Argonne 2002). Activities will be as follows:

- Additional boreholes (Figure 3.1) may be advanced on properties adjacent to the former CCC/USDA facility. The potential locations are based on data collected during the KDHE investigation in August–November 2005 (KDHE 2006a). The exact number and locations of boreholes will be determined after data are collected during Phase 2, in consultation with the CCC/USDA and KDHE project managers.
- Electronic data and groundwater samples will be collected at each borehole location for chemical analyses. Soil samples will not be collected at these locations unless a source area is identified or suspected and authorization is obtained from the CCC/USDA and KDHE project managers. The exact number of boreholes necessary to accomplish the Phase 3 goal will be determined as data are collected during field activities. Groundwater samples will be collected every 5 ft from the top of the semi-confined aquifer to the top of bedrock, provided that the aquifer yields enough water for sampling.



- Chemical analyses will be conducted on the groundwater samples. The soil samples (if any are collected) will be subjected to chemical analyses, and selected samples will undergo hydrogeologic testing and grain size analysis.
- As data are collected in the field, adjustments to the number of sample points, the sample locations and sampling intervals may be necessary. The KDHE project manager will be contacted during field activities and kept apprised of results. Any proposed changes to the work plan will be discussed and mutually agreed upon by the CCC/USDA and KDHE project managers before the plan is modified.

***Phase 4:*** *If data indicate that a source area exists on the former CCC/USDA facility and that additional delineation and monitoring of the contaminant plume is warranted, install piezometers to expand the existing monitoring network and augment data collected during Phase 2 and Phase 3. Whether implementation of this phase of work is necessary will be discussed and mutually agreed upon by the CCC/USDA and KDHE project managers.*

After completion of *Phases 1–3*, additional small-diameter piezometers may be installed at selected locations. The data collected during this final phase will further delineate the contaminant plume associated with the former CCC/USDA property and will establish sampling points for future monitoring. Exact piezometer locations will be determined after data from *Phases 1–3* are evaluated. The proposed number of additional piezometers and locations will be discussed with the CCC/USDA and KDHE project managers. The work will be conducted as follows:

- Piezometers installed by using the direct-push capabilities of the CPT will be advanced to the top of bedrock. In accordance with KDHE regulations, well installation methods will include use of the CPT to advance a 4.25-in. borehole to a depth of 20 ft BGL. From 20 ft BGL to the base of the aquifer, a 3.25-in.-diameter hole will be driven to the desired depth.

- Soil and groundwater sampling may be conducted during well installation activities. The need to collect samples will depend on the piezometer location and the proximity to potential source areas. If a conventional drill rig must be used, soil samples will be collected when possible by using a continuous-core barrel. If continuous coring is not successful, samples will be collected from cuttings as they reach the surface. At a minimum, a groundwater sample will be collected from each piezometer after it has been completed.
- All piezometers installed with direct-push technology as part of this investigation will be cased with 1-in.-diameter, Schedule 40 PVC with a 0.010-in. slotted screen. Casing centralizers will be used when necessary, and screen lengths and depths will be dictated by the aquifer thickness and groundwater analytical data collected during the initial sampling. The KDHE project manager will be consulted before the exact screen depth intervals are determined.
- Appropriate quantities of sand and grout will be used to complete each piezometer properly. A tremie pipe will be used to ensure that materials are placed properly in all annular spaces. Piezometers will be completed flush to the ground where necessary. All other piezometers will be completed above grade. Piezometer completions will be in accordance with KDHE regulations and the procedures in the *Master Work Plan* (Argonne 2002).

### 3.4 Sampling and Reporting Schedule

The proposed investigation is scheduled for fall 2006, pending successful negotiation of access. The CCC/USDA and Argonne will notify the KDHE a minimum of two weeks before field activities related to the proposed sampling program begin.

A report will be completed and submitted to the KDHE within 120 days after Argonne completes its quality review of the data. The report will follow the guidelines in *Scope of Work (SOW) for a Comprehensive Investigation*, established by KDHE Policy BER-RS-018 (KDHE 2005b). Accordingly, the report will include, at a minimum, the following:

- A narrative of work conducted
- Recommendations for further action(s) at this site, if warranted
- Maps depicting sample locations, groundwater flow, and contaminant levels
- Tables that include all analytical and field data
- Laboratory analytical data reports
- Field documentation
- Quality assurance and quality control data

### **3.5 Quality Assurance and Quality Control**

Procedures necessary to maintain the quality of data will be implemented during all phases of this investigation. Descriptions of the quality assurance and quality control methods are in Section 4 of the *Master Work Plan* (Argonne 2002). That document should be consulted for a more detailed narrative of these procedures.

### **3.6 Health and Safety**

The general health and safety plan for use during this project, Section 3 of the *Master Work Plan* (Argonne 2002), addresses all anticipated safety issues for activities at the Powhattan site. Specific emergency information for Powhattan is given here.

***Powhattan has 911 service.*** All emergency calls, including police, fire, and ambulance calls, will be directed for an appropriate response from this number. Powhattan has no emergency medical facilities. A hospital with emergency medical facilities is in Hiawatha, Kansas. Driving directions and a map of the route to the hospital are in Figure 3.3. Additional emergency information is in Table 3.1.

An Argonne health-safety-environmental protection representative will visit the site during field activities to observe and monitor operations.

### **3.7 Powhattan Contacts**

James C. Owens, Mayor  
428 West Main Street  
Powhattan, KS 66527  
785-474-7125 (office)  
785-474-3542 (home)

Cathy J. Iverson, City Clerk  
428 West Main Street  
Powhattan, KS 66527  
785-474-7125 (office)  
785-742-9688 (home)

Rural Water District No. 2 of Brown County  
110 Commercial Street  
Powhattan, KS 66527  
785-474-3407

Powhattan Post Office  
302 Main Street  
Powhattan, KS 66527  
785-474-3537

Debbie Parker, Brown County Clerk  
Brown County Courthouse  
601 Oregon Street  
Hiawatha, KS 66434  
785-742-2581  
Hours: 8 a.m. to 5 p.m., Monday–Friday

TABLE 3.1 Emergency information for the investigation at Powhattan, Kansas.<sup>a</sup>

Resource	Telephone No.	Name
All emergencies	911 <sup>b</sup>	Brown County, Kansas, Emergency Management
Fire	785-474-3339	Powhattan Fire Department 201 South Commercial Powhattan, Kansas
Hospital (nonemergency)	785-742-2131	Hiawatha Community Hospital <sup>c</sup> 300 Utah Street Hiawatha, Kansas
Police (nonemergency)	785-742-7125	Brown County Sheriff's Office 706 Utah Street Hiawatha, Kansas
Industrial hygiene	630-252-3310	Argonne — Industrial Hygiene
Safety	630-252-2885 630-252-3924	EVS Division <sup>d</sup> Field Safety Coordinator (Monte Brandner) EVS Division <sup>d</sup> Environment, Safety, and Health Coordinator (Dave Peterson)
Security	630-252-5737 630-252-5731	Argonne — Operations Security (workdays) (after hours and weekends)
Poison control	800-248-0074	University of Kansas Medical Center
Utilities survey	800-344-7233 800-DIG-SAFE	Kansas One Call, Wichita, Kansas

<sup>a</sup> Post this table in the field operations base.

<sup>b</sup> 911 calls from cell phones can be routed to various 911 centers, depending on which tower picks up the call. Ask whether you have the **Brown County, Kansas, 911 Center** before you describe your problem. The call will be transferred if you have reached a different 911 center.

<sup>c</sup> The route from Powhattan to the hospital is shown in Figure 3.3.

<sup>d</sup> Environmental Science Division at Argonne National Laboratory.

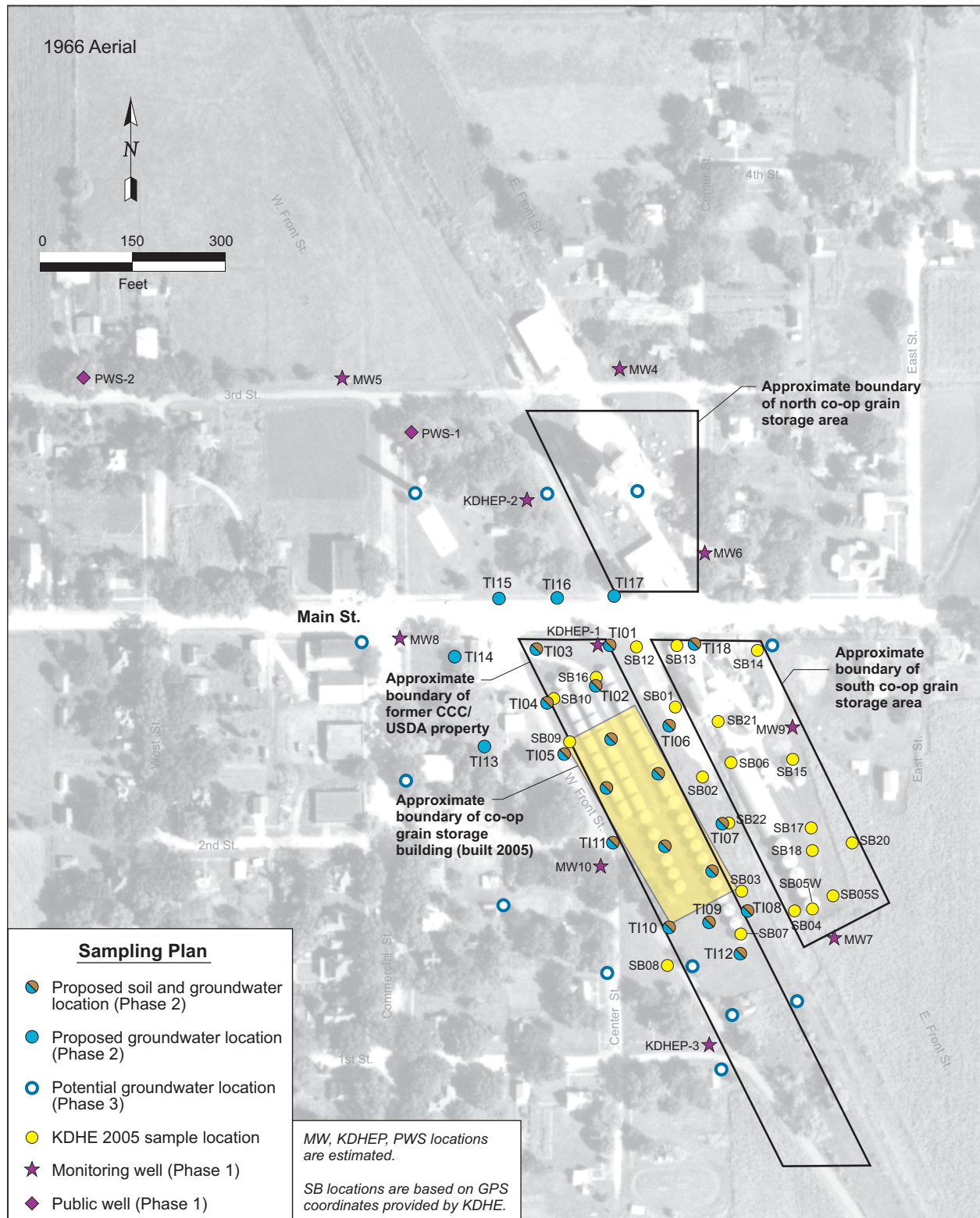


FIGURE 3.1 Proposed and potential sampling points at Powhattan, Kansas. Source of photograph: USDA (1966).



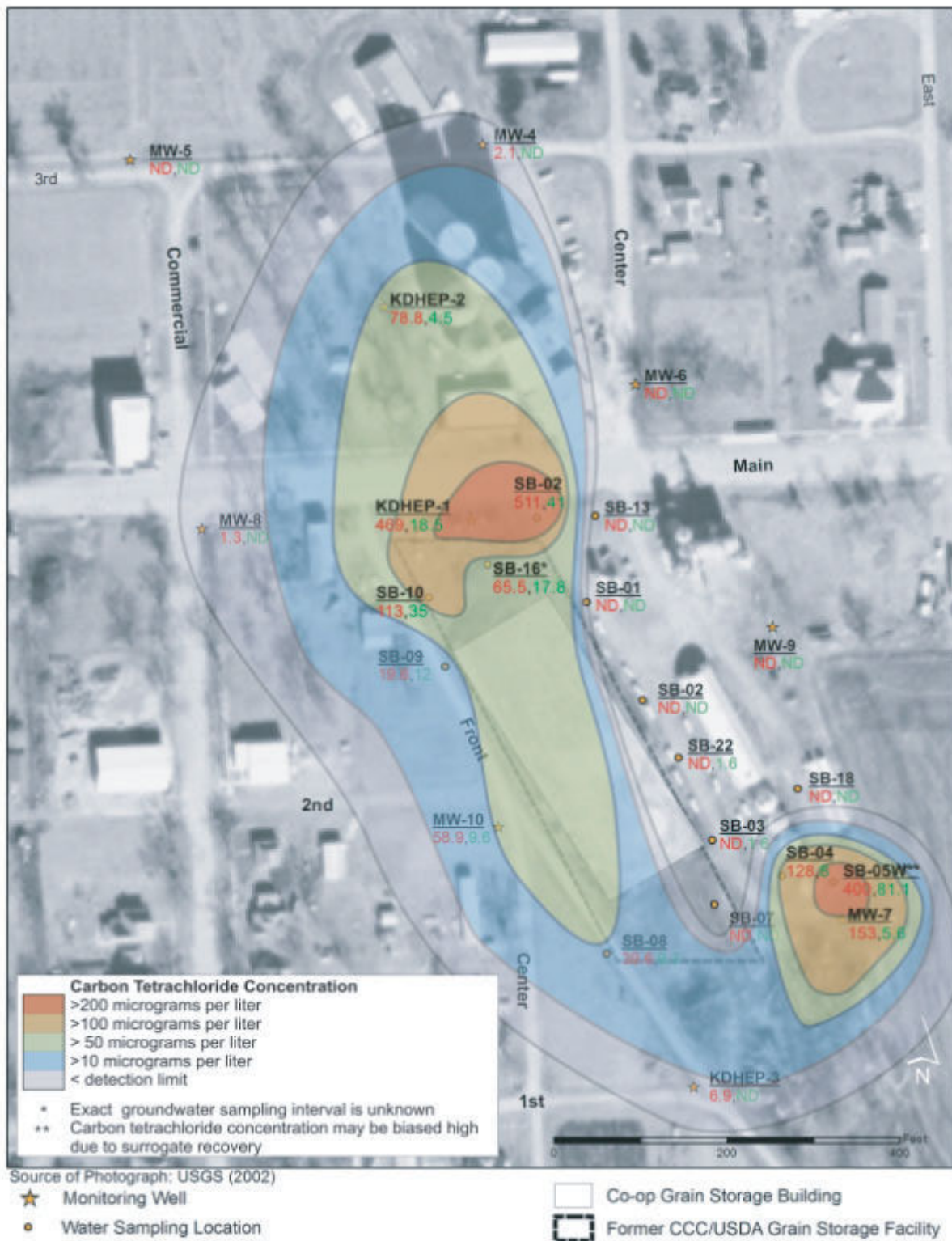


FIGURE 3.2 Interpreted distribution of carbon tetrachloride in groundwater at Powhattan in November 2005. Source: KDHE (2006).

### Directions from Powhattan to Hiawatha Community Hospital in Hiawatha, Kansas

- Go West on Main St. in Powhattan toward Goldfinch Rd.
- Turn right (north) onto Goldfinch Rd. and continue for ~6 mi.
- Turn right (east) onto US-36 and continue for ~6 mi.
- Turn left (north) onto US-73/US-159 and continue for ~1 mi. into Hiawatha.
- Turn left (west) onto Utah St. for 2 blocks to Hospital (approximately 0.1 mi.).

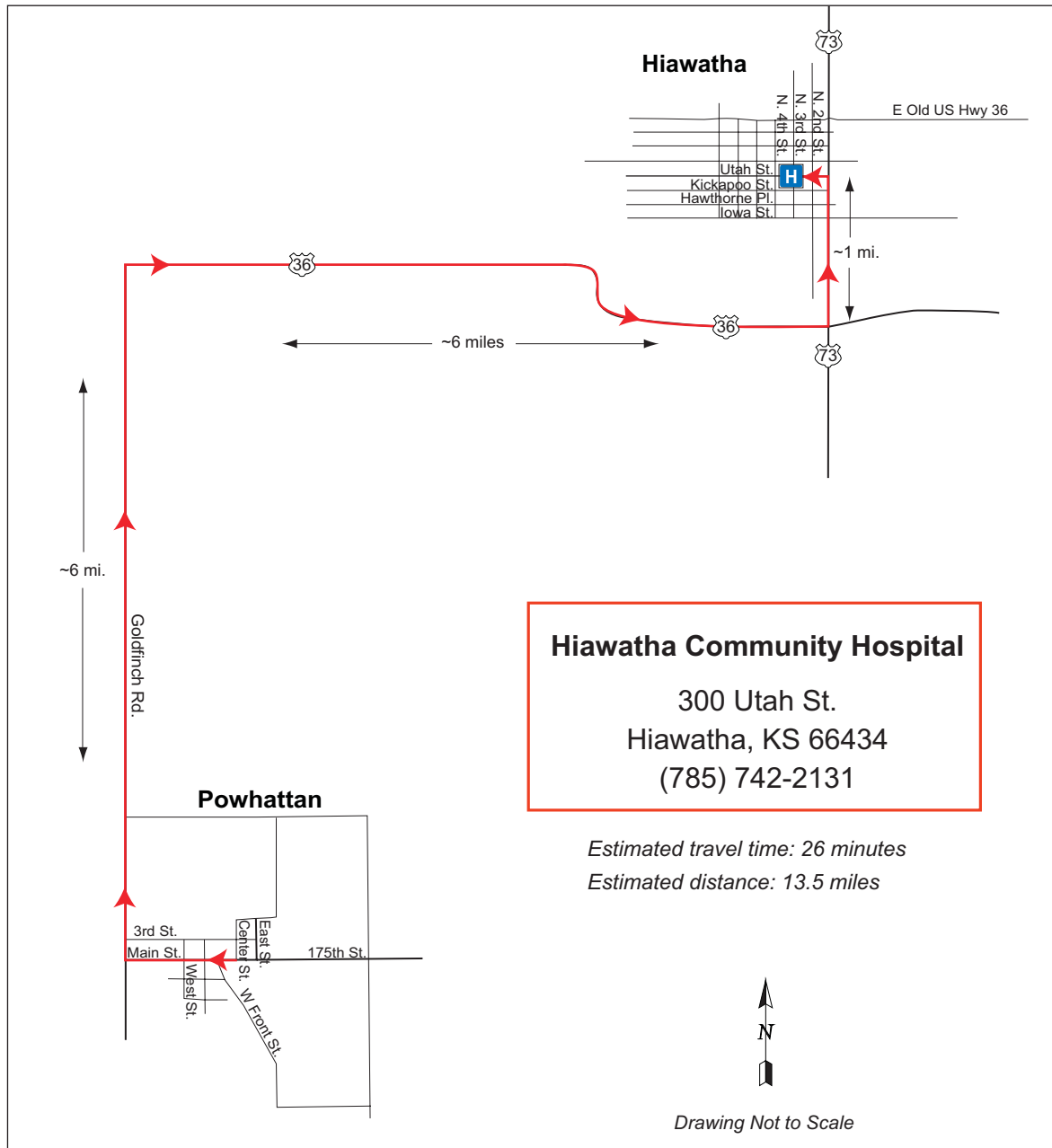


FIGURE 3.3 Route to the Hiawatha Community Hospital from Powhattan, Kansas.



## 4 References

Argonne, 2002, *Final Master Work Plan: Environmental Investigations at Former CCC/USDA Facilities in Kansas, 2002 Revision*, ANL/ER/TR-02/004, prepared for Commodity Credit Corporation, U.S. Department of Agriculture, by Argonne National Laboratory, Argonne, Illinois, December.

EPA, 1987, *Potential Hazardous Waste Site: Preliminary Assessment*, Form 2070-12, completed by Rick Bean, Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas for the U.S. Environmental Protection Agency, Region VII, Kansas City, Kansas, October 27.

EPA, 1988a, *Potential Hazardous Waste Site: Site Inspection Report for Powhattan Public Water Supply #1, Powhattan, Brown County, Kansas*, Form 2070-13, completed by Rick Bean, Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas for the U.S. Environmental Protection Agency, Region VII, Kansas City, Kansas, June 1.

EPA, 1988b, *Hazard Ranking System Scoresheet for Powhattan Public Water Supply #1, Powhattan, Brown County, Kansas*, completed by Rick Bean, Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas for the U.S. Environmental Protection Agency, Region VII, Kansas City, Kansas, July 1.

EPA, 1988c, *Findings and Notice of Violation under Docket No. 88-VII-PWS-02 in the matter of City of Powhattan, Kansas pursuant to Section 1414(a) of the Safe Drinking Water Act (SDWA), as amended*, U.S. Environmental Protection Agency, Region VII, Water Management Division, Kansas City, Kansas, October 14.

EPA, 1995, *Method 524.2: Measurement of Purgeable Organic Compounds in Water by Capillary Column Gas Chromatography/Mass Spectrometry, Revision 4.1*, edited by J.W. Munch, National Exposure Research Laboratory, Office of Research and Development, U.S. Environmental Protection Agency, Cincinnati, Ohio.

EPA, 1998, *Test Methods for Evaluating Solid Waste: Physical/Chemical Methods*, EPA SW-846, 3rd edition, Draft Update IVA, U.S. Environmental Protection Agency, January.

EPA, 2006, *National Primary Drinking Water Standards*, Office of Ground Water and Drinking Water, U.S. Environmental Protection Agency, Washington, D.C., <http://www.epa.gov/safewater/consumer/pdf/mcl.pdf>, accessed July 11.

GeoCore, 1994a, *Work Plan: Phase I Sampling and Site Visit: Brown County Groundwater Investigation*, prepared by GeoCore Services, Inc., Salina, Kansas, for the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, April 12.

GeoCore, 1994b, *Well Survey Material: Brown County Groundwater Investigation: Powhattan PWS Site*, field notes recorded by GeoCore Services, Inc., Salina, Kansas, during Phase I sampling of private wells, May 20.

GeoCore, 1996, *Environmental Site Investigation Report: Phase II Drilling & Sampling: Brown County Groundwater Investigation: Powhattan Public Water Supply Site, Powhattan, Kansas*, prepared by GeoCore Services, Inc., Salina, Kansas, for the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, March 15.

GSI, 1998, *Monitoring Trip Report for the Powhattan PWS Site, Powhattan, Brown County, Kansas*, prepared by Geotechnical Services Inc., Wichita, Kansas for the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, December.

GSI, 2000, *Powhattan PWS Site Long Term Monitoring 2000 Trip Report for Powhattan, Kansas*, prepared by Geotechnical Services Inc., Wichita, Kansas for the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, June.

GSI, 2002, *Powhattan PWS Site Long Term Monitoring 2002 Trip Report for Powhattan, Kansas*, prepared by Geotechnical Services Inc., Wichita, Kansas for the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, February.

KDHE, 1987, *Preliminary Assessment Conducted at Powhattan Public Water Supply, KSD981710353*, prepared by the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, October 29.

KDHE, 1988a, Transcript of interviews with Powhattan residents by Rick Bean and Sandy Voegli, Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, February 29.

KDHE, 1988b, *Final Site Inspection Report for the Powhattan Public Water Supply, KSD981710353, Powhattan, Kansas*, prepared by the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, June 30.

KDHE, 1989, *Order, Findings of Fact, and Conclusions of Law in the Matter of Violation of Kansas Statutes and Regulations by the City of Powhattan, Kansas, Case No. 89-E-8*, Kansas Department of Health and Environment, Topeka, Kansas, February 13.

KDHE, 2005a, *Field Activities and Sampling Plan for Powhattan, Kansas*, prepared by Christopher Carey and Jon Vopata for Rick Bean, Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, October 31.

KDHE, 2005b, *Scope of Work (SOW) for a Comprehensive Investigation*, BER Policy #BER-RS-018, Bureau of Environmental Remediation/Remedial Section Guidance, Kansas Department of Health and Environment, Topeka, Kansas, revised 2005 ([http://www.kdheks.gov/ber/policies/BER\\_RS\\_018\\_SOW.pdf](http://www.kdheks.gov/ber/policies/BER_RS_018_SOW.pdf)).

KDHE, 2006a, *Supplemental Sampling Event Trip Report: Powhattan PWS Site, Powhattan, Brown County, Kansas* prepared by the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, February 9.

KDHE, 2006b, personal communication from C. Carey (Bureau of Environmental Remediation, Kansas Department of Health and Environment, Topeka, Kansas) to L. LaFreniere (Argonne National Laboratory, Argonne, Illinois), October.

Maxim, 2004, *Groundwater Monitoring Results: Powhattan PWS Site, Powhattan, Kansas: 2004 Trip Report*, prepared by Maxim Technologies Inc., A TetraTech Company, Kansas City, Kansas for the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, July 9.

Terranext, 2005, *November 2005 Sampling Event: Powhattan PWS Site, Powhattan, Kansas*, prepared by Terranext, Lenexa, Kansas for the Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, December 12.

Tracer, 1988, *Phase I & II Shallow Soil Gas Survey in Kansas*, prepared by Tracer Research Corporation, Tucson, Arizona, for Kansas Department of Health and Environment, Bureau of Environmental Remediation, Topeka, Kansas, January.

USDA, 1966, aerial photograph YY-IGG-63, U.S. Department of Agriculture, Washington, D.C., September 8.

## **Appendix A:**

### **Well Construction Data and Results of Groundwater Sampling in Previous Investigations**

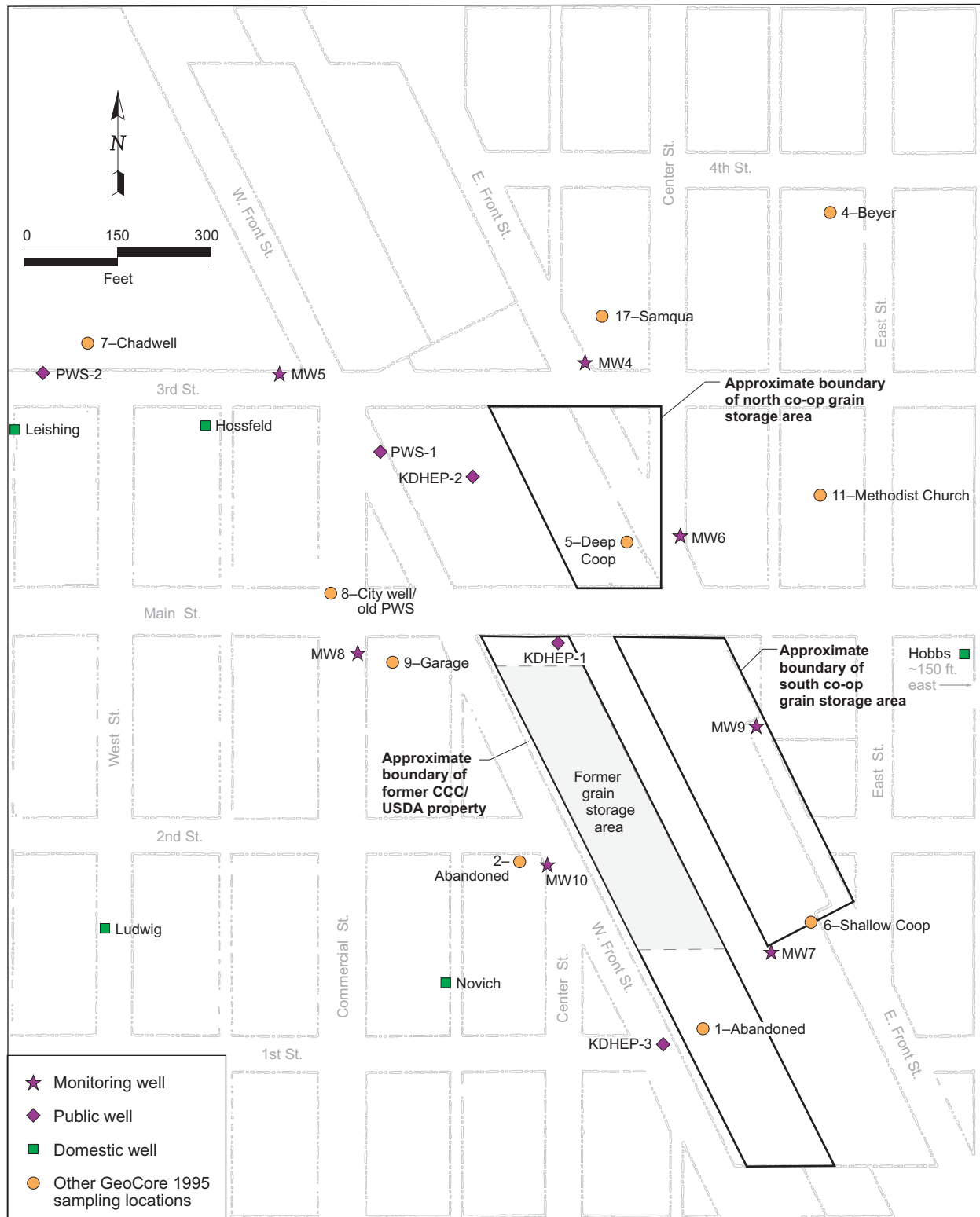


FIGURE A.1 Locations of wells sampled previously in Powhattan, Kansas.

TABLE A.1 Construction summary for wells in Powhattan, Kansas.

Well Name	Well Owner	Location	Latitude (N)	Longitude (W)	Completion Date	WWC-5 Filed	Casing Diam. (in.)	Well Use <sup>a</sup>	Well Type	Elevation (ft AMSL)				Depth (ft BGL)		
										Surface 1995–2004	TOC <sup>b</sup> 1995–2004	Surface 2006	TOC 2006	Total	Screen Interval	Filter Interval
Monitoring Wells																
KDHEP-1	KDHE	Across from Powhattan Café, N of former CCC/USDA facility	39-45-42	95-37-57	03/15/88	Y	2	M	Flush	1206.45	1206.26	1208.78	1208.67	65.1	55.1–65.1	52–65.1
KDHEP-2	KDHE	City park	39-45-45	95-37-59	03/30/88	Y	2	M	Flush	1206.25	1206.56	1209.50	1209.15	68.1	58.1–68.1	56.1–68.1
KDHEP-3	KDHE	S edge of town, W of elevator, E of Commercial St.	39-45-35	95-37-55	04/06/88	Y	2	M	Aboveground to flush	1200.40	1202.07	1204.82	1204.41	62	52–62	50–62
MW-4	KDHE	NE corner of Third St. and E Front St.	39-45-46	95-37-57	08/22/94	Y	2	M	Flush	1205.64	1205.35	1208.40	1207.99	64.7	54.7–64.7	52–64.7
MW-5	KDHE	N side of Third St., 80 ft W of Commercial St.	39-45-46	95-38-03	08/24/94	Y	2	M	Flush	1205.75	1205.39	1208.66	1208.32	68	58–68	56–68
MW-6	KDHE	100 ft N of Main St. on E side of Center St.	39-45-43	95-37-55	10/27/94	Y	4	M	Flush	1204.56	1204.18	1206.76	1206.49	73	56–66	54–73
MW-7	KDHE	200 ft S of old co-op grain bins	39-45-37	95-37-53	08/31/94	Y	2	M	Aboveground to flush	1202.19	1204.10	1204.39	1203.85	56	46–56	43.5–56
MW-8	KDHE	SE corner of Main St. and Commercial St.	39-45-42	95-38-02	01/09/95	Y	4	M	Flush	1208.80	1208.55	1211.36	1210.99	69	55–65	52.1–69
MW-9	KDHE	150 ft S of Main St. on E side of co-op	39-45-40	95-37-53	11/02/94	Y	4	M	Aboveground to flush	1202.23	1204.78	1204.23	1203.82	65	52–62	50–65
MW-10	KDHE	SW corner of Second St. and W Front St.	39-45-38	95-37-57	11/02/94	Y	4	M	Flush	1205.21	1204.94	1207.66	1207.31	69	56–66	52–69
Public Supply Wells																
PWS 1	City				Unk <sup>c</sup>		Unk	NIU						70		
PWS 2	City				Unk		Unk	NIU						88		
Private Wells																
1 <sup>d</sup>	Abandoned 1						6	Aban			1201.45			23.3		
2	Abandoned 2						6	Aban			1205.393			34		
4	Beyer, Dennis						Unk	NIU			Unk			Unk		
5	Co-op (deep)	In basement of co-op					6	NIU						70.4		
6	Co-op (shallow)	SE of co-op					10	Aban		1205.86	1205.86			31.1		
7	Chadwell, Mary	Third St.					36	Lawn		1208.85	1209.51			47		
8	City (old PWS)						36	Aban			1209.22			44.1		
9	Garage						Unk	NIU						Unk		
11	Methodist Church	Behind parsonage					11	NIU			1199.63			29.1		
17	Samqua						6	NIU						Unk		
-	Hobbs	East Main Street.								1202.33	1202.88			13		
-	Hossfeld	Third St. and West St.					5	Lawn		1210.15	1206.87			98.6		
-	Leishing	419 W. Third St.					10	Aban		1210.79	1210.79			31.6		
-	Ludwig	214 S. West St.					12	Aban			1207.56			Unk		
-	Novich	215 S. Commercial St.					Unk	Lawn		Unk	Unk			Unk		

<sup>a</sup> Well uses: Aban, abandoned; Lawn, lawn and garden; M, monitoring well; NIU, not in use; PWS, public water supply.

<sup>b</sup> TOC, top of casing.

<sup>c</sup> Unk, unkown.

<sup>d</sup> KDHE sampling reference point (KDHE 1988b).

TABLE A.2 Analytical data summary for wells at Powhattan, Kansas.

Well	Screen Interval (ft BGL)	Sample Date	Depth to Water (ft below TOC)	Nitrate as N (mg/L)	Concentration (µg/L)									
					Carbon Tetrachloride	Chloroform	Methylene Chloride	1,2-Dibromoethane (EDB)	Chloromethane	1,1,1-Trichloroethane	Benzene	Toluene	Ethylbenzene	Total Xylene
Monitoring Wells														
KDHEP-1	55.1–65.1	03/17/88	12.10	10.35	341	18.3	< 0.9	NA <sup>a</sup>	< 5	< 0.7	< 0.5	5	< 0.7	0.6
		05/09/88	10.75	NA	388	8.7	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
		05/20/94	6.85	NA	250	7.5	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		01/23/95	14.18	8.7	88	9.9	< 1	NA	< 1	2	< 1	< 1	< 1	< 1
		10/09/98	9.53	11.7	380	10	7.1 B <sup>b</sup>	NA	< 0.8	< 0.5	< 2	< 2	< 2	< 7
		04/25/00	15.22	8.09	180	29	< 12	< 2.5	< 4	< 2.5	< 10	< 10	< 10	NA
		01/15/02	11.79	14.2	500	14	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	14.22	10.4	359	17.6	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	11.33	11	420	15	< 1	< 1	< 1	NR <sup>c</sup>	NR	NR	NR	NR
		11/03/05	12.80	14.6	469	18.5	< 1	< 0.028	< 1	< 1	< 1	< 1	< 1	< 3
KDHEP-2	58.1–68.1	04/06/88	12.70	16.8	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
		05/09/88	13.23	NA	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
		05/20/94	7.71	NA	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		01/23/95	16.02	12.9	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		10/08/98	8.73	15.3	28	1.8	7.3 B	NA	0.83	< 0.5	< 2	< 2	< 2	< 7
		04/25/00	17.00	10.8	32	1.7	< 2.5	< 0.5	< 0.8	< 0.5	< 2	< 2	< 2	NA
		01/15/02	12.52	14.9	63	4.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	14.58	13.9	68.6	4.4	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	11.27	15.7	78	4.9	< 1	< 1	< 1	NR	NR	NR	NR	NR
		11/03/05	13.40	18.1	76.8	4.5	< 1	< 0.028	< 1	< 1	< 1	< 1	< 1	< 3
KDHEP-3	52–62	04/12/88	5.10	32.47	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
		05/09/88	6.55	NA	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
		05/20/94	4.39	NA	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		01/23/95	11.08	8.1	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		10/07/98	5.24	26.8	< 1.2	< 0.5	6.8 B	NA	< 0.8	< 0.5	< 2	< 2	< 2	< 7
		04/25/00	14.85	18	1.3	< 0.5	< 2.5	< 0.5	< 0.8	< 0.5	< 2	< 2	< 2	NA
		01/15/02	10.26	23.5	1.4	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	13.57	19.2	5	0.48 J <sup>d</sup>	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	9.60	22	7.8	< 1	< 1	< 1	< 1	NR	NR	NR	NR	NR
		11/02/05	11.45	23.8	6.9	< 1	< 1	< 0.028	< 1	< 1	< 1	< 1	< 1	< 3
MW-4	54.7–64.7	01/23/95	15.45	31.7	3.7	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		10/08/98	9.01	15.2	4.6	< 0.5	4.3 B	NA	< 0.8	< 0.5	< 2	< 2	< 2	< 7
		04/25/00	16.72	18.6	2.9	0.54	< 2.5	< 0.5	< 0.8	< 0.5	< 2	< 2	< 2	NA
		01/15/02	12.73	21.7	2.9	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	14.32	20.6	2.9	0.45 J	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	11.19	16.8	2.7	< 1	< 1	< 1	< 1	NR	NR	NR	NR	NR
		11/02/05	13.72	23.2	2.1	< 1	< 1	< 0.028	< 1	< 1	< 1	< 1	< 1	< 3



TABLE A.2 (Cont.)

Well ID	Screen Interval (ft BGL)	Sample Date	Depth to Water (ft below TOC)	Nitrate as N (mg/L)	Concentration (µg/L)									
					Carbon Tetrachloride	Chloroform	Methylene Chloride	1,2-Dibromoethane (EDB)	Chloromethane	1,1,1-Trichloroethane	Benzene	Toluene	Ethylbenzene	Total Xylene
Monitoring Wells (cont.)														
MW-5	58–68	01/23/95	17.54	26.3	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		10/08/98	7.02	19.2	< 1.2	< 0.5	4.7 B	NA	< 0.8	< 0.5	< 2	< 2	< 2	9
		04/25/00	16.03	15.3	< 1.2	< 0.5	< 2.5	< 0.5	< 0.8	< 0.5	< 2	< 2	< 2	NA
		01/14/02	11.10	14.6	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	13.46	12.1	< 1	< 1	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	8.83	13.2	< 1	< 1	< 1	< 1	< 1	NR	NR	NR	NR	NR
		11/02/05	12.34	14.5	< 1	< 1	< 1	< 0.028	< 1	< 1	< 1	< 1	< 1	< 3
MW-6	56–66	01/23/95	11.18	19.1	< 1	< 1	< 1	NA	< 1	< 1	4.4	< 1	< 1	< 1
		10/08/98	6.72	16.4	< 1.2	< 0.5	3.2 B	NA	< 0.8	< 0.5	< 2	< 2	< 2	< 7
		04/25/00	14.67	9.25	< 1.2	< 0.5	< 2.5	< 0.5	< 0.8	< 0.5	< 2	< 2	< 2	NA
		01/14/02	10.83	9.96	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	12.56	12.1	< 1	< 1	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	9.80	13.7	< 1	< 1	< 1	< 1	< 1	NR	NR	NR	NR	NR
		11/02/05	11.00	15.3	< 1	< 1	< 1	< 0.028	< 1	< 1	< 1	< 1	< 1	< 3
MW-7	46–56	01/23/95	12.20	18.4	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		10/09/98	2.87	52.1	< 1.2	< 0.5	7.0 B	NA	< 0.8	< 0.5	< 2	< 2	< 2	< 7
		04/25/00	NS <sup>e</sup>	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
		01/14/02	8.20	26.7	33	1.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	11.91	15.3	73.5	2.2	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	5.72	17	180	6.4	< 1	< 1	< 1	NR	NR	NR	NR	NR
		11/03/05	8.82	16.5	153	5.6	< 1	< 0.028	< 1	< 1	< 1	< 1	< 1	< 3
MW-8	55–65	01/23/95	18.73	24.9	6	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		10/09/98	10.11	25.3	4.3	1.5	2.9 B	NA	< 0.8	< 0.5	< 2	< 2	< 2	< 7
		04/25/00	18.61	27.8	2.8	0.75	< 2.5	< 0.5	< 0.8	< 0.5	< 2	< 2	< 2	NA
		01/15/02	13.89	39	2.1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	16.03	33.6	1.6	0.52 J	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	13.70	32.9	1.6	< 1	< 1	< 1	< 1	NR	NR	NR	NR	NR
		11/02/05	14.10	36.8	1.3	< 1	< 1	< 0.028	< 1	< 1	< 1	< 1	< 1	< 3
MW-9	52–62	01/23/95	12.30	9.9	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		10/08/98	1.52	55.8	< 1.2	< 0.5	6.8 B	NA	< 0.8	< 0.5	< 2	< 2	< 2	< 7
		04/25/00	12.18	49.8	< 1.2	< 0.5	< 2.5	3.3	< 0.8	< 0.5	< 2	< 2	< 2	NA
		01/14/02	7.94	47.1	< 1	< 1	< 1	1.5	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	10.28	33.6	< 1	< 1	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	6.06	32.7	< 1	< 1	< 1	< 1	< 1	NR	NR	NR	NR	NR
		11/02/05	7.77	50.4	< 1	< 1	< 1	0.34	< 1	< 1	< 1	< 1	< 1	< 3

TABLE A.2 (Cont.)

Well ID	Screen Interval (ft BGL)	Sample Date	Depth to Water (ft below TOC)	Nitrate as N (mg/L)	Concentration (µg/L)									
					Carbon Tetrachloride	Chloroform	Methylene Chloride	1,2-Dibromoethane (EDB)	Chloromethane	1,1,1-Trichloroethane	Benzene	Toluene	Ethylbenzene	Total Xylene
Monitoring Wells (cont.)														
MW-10	56–66	01/23/95	13.28	8.6	24	2.4	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
		10/09/98	5.25	6.57	38	7	3.4 B	NA	< 0.8	< 0.5	< 2	< 2	< 2	< 7
		04/25/00	15.72	7.48	64	11	< 2.5	< 0.5	< 0.8	< 0.5	< 2	< 2	< 2	NA
		01/15/02	11.27	10.4	58	9.4	< 1	< 1	< 1	< 1	< 1	< 1	< 1	< 1.3
		05/18/04	13.83	5.5	65.3	10.1	< 2	< 2	< 1	< 1	< 1	< 1	< 1	< 1
		06/07/05	10.67	5.76	54	8.4	< 1	< 1	< 1	NR	NR	NR	NR	NR
		11/03/05	11.42	7.3	58.9	9.6	< 1	< 0.028	< 1	< 1	< 1	< 1	< 1	< 3
Public Supply Wells														
PWS 1	Unknown	01/12/71		54	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		03/07/73		87	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		03/25/75		84	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		03/28/77		85	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		05/01/79		25	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		09/09/86		25	4	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6
		10/14/86		NA	2	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6
		01/28/88		18.81	3.6	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6
		05/09/88		NA	3.8	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
PWS 2	Unknown	08/31/70		69	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		06/28/72		77	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		07/06/76		100	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		05/01/79		26	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
		09/09/86		19	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6
		01/28/88		15.53	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6
		05/09/88		NA	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
Private Wells														
1 (Abandoned 1)		01/28/88	3.10	0.34	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6
2 (Abandoned 2)		01/28/88	6.90	0.24	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	0.7	< 0.7	< 0.6
4 (Beyer)		01/29/88		1.07	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6
5 (Co-op deep)		02/08/88	7.10	5.55	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	2.4	4.6	8.8
		03/17/88		NA	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
		03/25/88		NA	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	0.5	< 0.5	< 0.7	< 0.6
		05/20/94		NA	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
6 (Co-op shallow)		03/25/88	6.00	NA	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
		05/20/94		NA	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
7 (Chadwell)		02/08/88		NA	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.5	< 0.5	< 0.7	< 0.6
		05/20/94	3.77	NA	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
8 (Old city well)		01/28/88	12.80	5.98	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.5	< 0.7	< 0.6
9 (Garage)		01/28/88		NA	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6
11 (Methodist Church)		01/28/88	3.10	0.13	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6

TABLE A.2 (Cont.)

Well ID	Screen Interval (ft BGL)	Sample Date	Depth to Water (ft below TOC)	Nitrate as N (mg/L)	Concentration (µg/L)									
					Carbon Tetrachloride	Chloroform	Methylene Chloride	1,2-Dibromoethane (EDB)	Chloromethane	1,1,1-Trichloroethane	Benzene	Toluene	Ethylbenzene	Total Xylene
Private Wells (cont.)														
17 (Samqua)		01/28/88		NA	< 0.7	< 0.5	< 0.9	NA	< 5	< 0.7	< 0.4	< 0.4	< 0.7	< 0.6
Hobbs		05/20/94	1.84	NA	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
Hossfield		05/20/94	28.07	NA	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
Leishing		05/20/94	8.54	NA	< 0.2	0.7	< 0.2	NA	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2	< 0.2
Ludwig		05/20/94	4.46	NA	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1
Novich		05/20/94		NA	< 1	< 1	< 1	NA	< 1	< 1	< 1	< 1	< 1	< 1

<sup>a</sup> NA, sample not analyzed for this constituent.

<sup>b</sup> Qualifier B indicates that the constituent was found in the laboratory method blank analyzed with the sample.

<sup>c</sup> NR, result not reported in investigation reports on file.

<sup>d</sup> Qualifier J indicates an estimated concentration below the method quantitation limit.

<sup>e</sup> NS, well not sampled; could not be found during sampling event.

TABLE A.3 Analytical results for groundwater samples collected by the KDHE in November 2005 to determine contaminant sources.<sup>a</sup>

Location	Depth (ft BGL)	Sample Date	Concentration (mg/L)		Concentration (µg/L)			
			Nitrate	Ammonia	Carbon Tetrachloride	Chloroform	Mehylene Chloride	EDB
SB01	59–63	11/7/05	NA <sup>b</sup>	NA	ND <sup>c</sup> (1.0)	ND (1.0)	ND (1.0)	ND (0.01)
SB02	57.4–61.4	11/8/05	21	0.18	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.02)
SB03	56–60	11/8/05	28	< 0.1	ND (1.0)	1.6	ND (1.0)	0.03
SB04	51.6–55.6	11/9/05	18	< 0.1	128	8.0	ND (1.0)	ND (0.02)
SB05	51–56	11/18/05	NA	NA	400 <sup>d</sup>	81.1	ND (5.0)	ND (0.01)
SB07	55–60	11/9/05	9.5	< 0.1	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.02)
SB08	54.2–58.2	11/9/05	22	< 0.1	39.6	9.3	ND (1.0)	ND (0.02)
SB09	58.4–62.4	11/10/05	3.7	< 0.1	19.6	12	ND (1.0)	ND (0.02)
SB10	58.9–62.9	11/8/05	30	< 0.1	113	35	ND (1.0)	ND (0.02)
SB12	58.8–62.8	11/8/05	17	0.13	511	41	ND (20)	ND (0.02)
SB13	58.2–62.2	11/9/05	3.4	< 0.1	ND (1.0)	ND (1.0)	ND (1.0)	ND (0.02)
SB16	Unk <sup>e</sup>	11/18/05	18	NA	65.5	17.8	ND (1.0)	ND (0.01)
SB18	52–57	11/17/05	42	NA	ND (1.0)	ND (1.0)	ND (1.0)	0.18
SB22	55–60	11/18/05	36	NA	ND (1.0)	1.6	ND (1.0)	0.05

<sup>a</sup> Samples analyzed in off-site laboratory. Source of data: KDHE (2006a).

<sup>b</sup> NA, sample not analyzed for this constituent.

<sup>c</sup> ND, contaminant not detected at the indicated method detection limit.

<sup>d</sup> Carbon tetrachloride concentration might be biased high because of surrogate recovery at 131%.

<sup>e</sup> Sampling interval unknown. Rods were pushed to 59 ft BGL, but temporary casing met refusal at 40 ft BGL.

## **Appendix B:**

### **Results of Soil and Soil Gas Sampling in Previous Investigations**

TABLE B.1 Results of analyses of soil gas samples collected by Tracer Research Corporation on November 6, 1987.<sup>a</sup>

Sample Location	Depth (ft BGL)	Concentration (µg/L)					Total Hydrocarbons
		1,2-Dichloro-ethane	Carbon Tetrachloride	Chloroform	Trichloro-ethylene	Toluene	
SG01	4	0.1	0.0004	0.0004	0.002	< 0.03	< 0.03
SG02	3	0.1	0.0004	< 0.0002	0.001	< 0.03	< 0.03
SG03	4	0.4	0.0004	< 0.0002	0.004	0.2	2.0
SG04	3	1.0	0.0003	0.001	0.02	< 0.03	< 0.03
SG07	5	2.0	< 0.0002	< 0.0002	0.05	< 0.03	< 0.03
SG08	4	0.1	0.0004	< 0.0002	0.001	< 0.03	< 0.03

Source of data: Tracer (1988).

TABLE B.2 Analytical results for soil samples collected by the KDHE in April 1988.<sup>a</sup>

Sample Location	Sample Number	Sample Date	Depth (ft BGL)	Concentration (µg/L)	
				Carbon Tetrachloride	Chloroform
Boring #1 (Co-op south elevator)	B-1	4/5/88	4	< 0.7	< 0.5
	B-2	4/5/88	9	< 0.7	< 0.5
	B-3	4/5/88	15	< 0.7	< 0.5
Boring #2 (CCC/USDA area)	B-4	4/5/88	4	< 0.7	< 0.5
	B-5	4/5/88	9	< 0.7	< 0.5

<sup>a</sup> Samples were analyzed for 31 purgeable organics; none were detected. Source of data: KDHE (1988b).

TABLE B.3 Results of headspace field screening of subsurface soil samples collected by GeoCore in 1994.<sup>a</sup>

Location	Depth (ft BGL)	Reading (ppm)	Location	Depth (ft BGL)	Reading (ppm)
MW-4	5-7	ND <sup>b</sup>	MW-7	5-7	ND
	10-12	ND		10-12	ND
	15-17	ND		15-17	ND
	20-22	ND		20-22	ND
	25-27	ND		25-27	ND
	30-32	ND		30-32	ND
	35-37	ND		35-37	ND
	40-42	ND		40-42	ND
	45-47	ND		45-47	ND
	50-52	ND		50-52	0.4
	55-57	ND		55-57	0.6
	60-62	ND			
MW-5	5-7	ND	MW-8	5-7	ND
	10-12	0.2		10-12	ND
	15-17	0.3		15-17	ND
	20-22	0.1		20-22	ND
	25-27	0.2		25-27	ND
	30-32	ND		30-32	ND
	35-37	ND		35-37	ND
	40-42	0.3		40-42	ND
	45-47	0.2		45-47	ND
	50-52	0.3		50-52	ND
	55-57	ND			
	60-62	ND			
	65-66.3	ND			
SB-6	5-7	ND			
	10-12	0.6			
	15-17	1.1			
	20-22	ND			
	25-27	ND			
	30-32	ND			
	35-37	ND			
	40-42	ND			
	45-47	ND			
	50-52	ND			
	55-57	0.2			
	60-62	ND			
	65-67	ND			

<sup>a</sup> Analysis was with an organic vapor analyzer-flame ionization detector.  
Source of data: GeoCore (1996)

<sup>b</sup> ND, not detected.

TABLE B.4 Analytical results for soil samples collected by the KDHE in 2005 to identify contaminant sources.<sup>a</sup>

Sample Location	Depth (ft BGL)	Sample Date	Concentration (µg/kg)					Concentration (mg/kg)	
			Carbon Tetrachloride		Chloroform		EDB Off-site	Nitrate Off-site	Ammonia Off-site
			Field	Off-site	Field	Off-site			
Slambar-1	0.5	8/19/05	ND (2)	– <sup>b</sup>	ND <sup>c</sup> (2)	–	–	16	0.5
Slambar-2	0.5	8/19/05	ND (2)	–	ND (2)	–	–	60	1.7
Slambar-3	0.5	8/19/05	ND (2)	–	ND (2)	–	–	190	2.7
Slambar-4	0.5	8/19/05	ND (2)	–	ND (2)	–	–	34	0.4
Slambar-5	0.5	8/19/05	ND (2)	–	ND (2)	–	–	4.0	5.9
Slambar-6	0.5	8/19/05	ND (2)	–	ND (2)	–	–	8.6	7.9
P-2	Surface	11/2/05	–	–	–	–	–	1100	370
P-2	0.7	11/1/05	–	–	–	–	–	440	32
P-2	2	11/1/05	–	–	–	–	–	260	2.1
P-3	2–4	11/1/05	ND (5)	–	ND (5)	–	–	–	–
P-4	2–4	11/1/05	ND (5)	–	ND (5)	–	–	–	–
P-5	2–4	11/1/05	ND (5)	–	ND (5)	–	–	–	–
P-6	2–4	11/1/05	ND (5)	–	ND (5)	–	–	–	–
P-9	0.7	11/1/05	–	–	–	–	–	36	12
P-10	0.7	11/1/05	–	–	–	–	–	25	1.5
P-11	0.7	11/1/05	–	–	–	–	–	10	1.3
P-15	2–4	11/1/05	ND (5)	–	ND (5)	–	–	–	–
P-17	Surface	11/2/05	–	–	–	–	–	3.9	0.8
P-18	Surface	11/2/05	–	–	–	–	–	5.6	2.9
P-19	Surface	11/2/05	–	–	–	–	–	1.6	2
SB-01	2–4	11/7/05	ND (5)	–	ND (5)	–	–	–	–
SB-01	6–8	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-01	10–12	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-02	2–4	11/7/05	ND (5)	–	ND (5)	–	–	–	–
SB-02	6–8	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-02	10–12	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-03	2–4	11/7/05	ND (5)	–	ND (5)	–	–	–	–
SB-03	6–8	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-03	10–12	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-04	2–4	11/8/05	ND (5)	–	ND (5)	–	–	–	–
SB-04	6–8	11/8/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-04	10–12	11/8/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-05	2–4	11/8/05	ND (5)	–	ND (5)	–	–	17	0.6
SB-05	6–8	11/8/05	ND (5)	ND (5)	2.1 J <sup>d</sup>	ND (5)	ND (2)	10	2.5
SB-05	10–12	11/8/05	ND (5)	ND (5)	2.2 J	ND (5)	ND (2)	6.9	0.93
SB-06	2–4	11/8/05	ND (5)	–	ND (5)	–	–	–	–
SB-06	6–8	11/8/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-06	10–12	11/8/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-07	2–4	11/7/05	ND (5)	–	ND (5)	–	–	–	–
SB-07	6–8	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-07	10–12	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-10	2–4	11/7/05	2.3 J	ND (5)	1.7 J	ND (5)	ND (2)	–	–
SB-10	6–8	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-10	10–12	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-12	2–4	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	8.9	0.5
SB-12	6–8	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–



TABLE B.4 (Cont.)

Sample Location	Depth (ft BGL)	Sample Date	Concentration (µg/kg)					Concentration (mg/kg)	
			Carbon Tetrachloride		Chloroform		EDB Off-site	Nitrate Off-site	Ammonia Off-site
			Field	Off-site	Field	Off-site			
SB-12	10–12	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	49	ND (0.1)
SB-13	2–4	11/8/05	ND (5)	–	ND (5)	–	–	–	–
SB-13	6–8	11/8/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	95	0.8
SB-13	10–12	11/8/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-14	2–4	11/9/05	ND (5)	–	ND (5)	–	–	–	–
SB-14	6–8	11/9/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-14	10–12	11/9/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	–	–
SB-15	2–4	11/9/05	ND (5)	–	ND (5)	–	–	23	0.54
SB-15	6–8	11/9/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	25	0.22
SB-15	10–12	11/9/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	19	ND (0.1)
SB-16	2–4	11/7/05	ND (5)	–	ND (5)	–	–	170	0.51
SB-16	6–8	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	1.2	1.6
SB-16	10–12	11/7/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	3	ND (0.1)
SB-17	0.7	11/9/05	–	–	–	–	–	23	ND (0.1)
SB-17	2–2.5	11/9/05	–	–	–	–	–	260	0.27
SB-17	2–4	11/8/05	ND (5)	–	ND (5)	–	–	–	–
SB-17	3.5–4	11/8/05	–	–	–	–	–	50	ND (0.1)
SB-17	6–8	11/8/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	52	49
SB-17	10–12	11/9/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	18	ND (0.1)
SB-18	2	11/9/05	–	–	–	–	–	29	ND (0.1)
SB-18	2–4	11/8/05	ND (5)	–	ND (5)	–	–	95	ND (0.1)
SB-18	6–8	11/8/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	24	0.17
SB-18	10–12	11/8/05	ND (5)	ND (5)	ND (5)	ND (5)	ND (2)	20	ND (0.1)
SB-20	0.5–1	11/9/05	ND (5)	–	ND (5)	–	–	–	–
SB-20	1.5–2	11/9/05	ND (5)	–	ND (5)	–	–	–	–
SB-20	2–2.5	11/9/05	–	–	–	–	–	20	0.15
SB-21	0.5–1	11/9/05	ND (5)	–	ND (5)	–	–	20	1.1
SB-21	1.5–2	11/9/05	ND (5)	–	ND (5)	–	–	25	ND (0.1)

<sup>a</sup> Source of data: KDHE (2006a).

<sup>b</sup> Sample not submitted for off-site analysis.

<sup>c</sup> ND, contaminant not detected at the indicated method detection limit.

<sup>d</sup> Qualifier J indicates an estimated concentration below the method quantitation limit of 5 µg/kg.

## **Appendix C:**

### **Documentation of Former CCC/USDA Facility Boundaries**

TABLE C.1 Timeline of records related to the location of the former CCC/USDA grain storage facility and private grain storage operations in Powhattan, Kansas.<sup>a</sup>

Document Date	Document Identity	No. of Pages	Document Description	Relevance to Property Boundaries
6/12/1862	Land grant from U.S. government to Union Pacific Railroad Company	11	Sale of 123,832 acres by Kickapoo Indian tribe to the Central Branch of the Union Pacific Railroad Company. Land grant, authorized by President U.S. Grant, covers numerous townships, ranges, and sections, including all of Section 28 in Township 3 South, Range 16 East, containing 640 acres.	Section 28 is the location of Powhattan.
10/10/1877	Sale of property by railroad to David Bender	1	Sale of 160 acres in the southwest quarter of Section 28, T 3 S, R 16 E, to David Bender by the Union Pacific Railroad Company. The location of the property is not described in detail, but the 200-ft railroad right-of-way existing in 1877 is exempted from the sale.	The southwest quarter of Section 28 contains the southern portion of the city of Powhattan and is the future location of the CCC/USDA grain storage facility and the co-op.
8/20/1886	Sale of property by S.A. Holcomb to railroad	3	Sale of property along the planned route of the Chicago, Kansas, and Nebraska Railway Company for construction of a railroad. Includes a strip of land 100 ft wide (50 ft on either side of the centerline of the planned railroad) in the southwest quarter of Section 28 of T 3 S, R 16 E.	Expands the railroad right-of-way from 200 ft to 300 ft, 150 ft on either side of the track.
8/21/1886	Sale of property by Martin Bender to railroad	1	Sale of property along the planned route of the Chicago, Kansas, and Nebraska Railway Company for construction of a railroad. Includes a strip of land 100 ft wide (50 ft on either side of the centerline of the planned railroad) in an unknown parcel.	The document is incomplete, and the location of the property is not specified. May be associated with the 1877 sale by David Bender.
12/10/1890	Kansas online business entity search	1	The Brown County Cooperative Association was incorporated on December 10, 1890 (Kansas Secretary of State 2006).	Beginning date for Brown County Cooperative Association.
1891	1891 railroad publication	3	S.A. Holcomb is identified as a grain dealer or shipper in Powhattan (Mardos 2006).	Beginning date for grain shipment via rail from Powhattan.

TABLE C.1 (Cont.)

Document Date	Document Identity	No. of Pages	Document Description	Relevance to Property Boundaries
9/15/1949	Lease between railroad and CCC/USDA predecessor	3	Lease of property along railroad right-of-way to Brown County Agricultural Conservation Association, predecessor to the CCC/USDA. Lease begins at bottom of first page, with property described on second page. No subsequent leases and no termination agreement are on file with the Brown County Register of Deeds.	The former CCC/USDA property is located in the southwest quarter of Section 28, west of the former railroad. Parcel is 950 ft x 138 ft x 950 ft x 138 ft, or 3 acres.
7/13/1954	Aerial photo	1	1954 aerial photo from KDHE files (KDHE 2006a).	Photo shows a total of 28 grain storage structures on the former CCC/USDA facility west of the railroad (24 rectangular structures and 4 circular bins).
6/13/1959	Aerial photo	1	1959 aerial photo obtained by CCC/USDA. Photo ID YY-2W-120.	Photo shows a total of 43 grain storage structures on the former CCC/USDA facility west of the railroad (24 rectangular structures and 19 circular bins). A Quonset hut and 5 large circular bins that did not appear in the 1954 photo are now visible east of the railroad on co-op property.
9/8/1966	Aerial photo	1	1966 aerial photo obtained by CCC/USDA. Photo ID YY-1GG-63.	Photo shows the 43 CCC/USDA grain storage structures also visible in the 6/13/1959 photo.
1/6/1967	Abandonment of railroad line in Brown and Nemaha Counties (except through Powhattan)	2	Abandonment of railway line in Brown and Nemaha Counties by the Chicago, Rock Island, and Pacific Railroad Company, successor to the Chicago, Rock Island, and Pacific Railway and the Chicago, Kansas, and Nebraska Railway Company. Land abandoned includes the railroad right-of-way in the southwest quarter of the southeast quarter of Section 28 and the northern half of the northwest quarter of Section 28.	The railroad does not abandon the right-of-way through Powhattan, but retains ownership. On that right-of-way, the former CCC/USDA facility has operated east of the railroad, and the co-op has operated northern and southern facilities west of the railroad.

TABLE C.1 (Cont.)

Document Date	Document Identity	No. of Pages	Document Description	Relevance to Property Boundaries
8/18/1971	Co-op promissory note	–	The Brown County Cooperative Association gives a promissory note for \$500,000 to the Wichita Bank for Cooperatives to secure purchase of property in Powhattan and Hiawatha.	See the agreement dated 4/21/1972.
2/25/1972	Quitclaim deed between railroad and co-op	3	Chicago, Rock Island, and Pacific Railroad Company sells a portion of its depot grounds in Powhattan to the Brown County Cooperative Association. Property located in the western half of Section 28 is described in feet from the center point of the section. Only land is specified, at a value of \$2,725.	Concerns co-op property east of the former railroad tracks: 1,110 ft x 200 ft x 1,110 ft x 200 ft, or 5.1 acres. The 4/1/1986 quitclaim deed indicates that, notwithstanding this transaction on 2/25/1972, the railroad continued to be assessed taxes for the value of the property.
4/21/1972	Real estate mortgage and chattel security agreement by co-op	5	Real estate mortgage and chattel security agreement between the Brown County Cooperative Association and the Wichita Bank for Cooperatives for \$500,000. Property used to secure the loan includes land and associated grain storage facilities along the railroad right-of-way in Powhattan and Hiawatha. The agreement lists the land, as well as equipment and buildings on the properties.	Co-op property in Powhattan includes land (1,110 ft x 200 ft x 1,110 ft x 200 ft, or 5.1 acres) east of the former railroad. Property also includes feed mill equipment, elevator equipment, equipment in the Quonset, office equipment, and bulk fertilizer plant.
7/16/1972	Aerial photo	1	1972 aerial photo obtained by CCC/USDA. Photo ID 20013-172-40C.	Only two circular bins remain on the former CCC/USDA property west of the railroad. A wooden elevator is visible on co-op property east of the railroad and north of the Quonset hut.
10/18/1974	Quitclaim deed between railroad and Mary Chadwell	5	Sale of a portion of the depot grounds to Mary Chadwell by the railroad. Property sold includes a portion of the depot grounds in the northwest quarter of Section 28 west of the former railroad.	Parcel lies north of the former CCC/USDA facility and west of the former railroad (150 ft x 575 ft x 170 ft x 500 ft, or 1.85 acres). The 4/1/1986 quitclaim deed indicates that, notwithstanding this transaction on 10/18/1974, the railroad continued to be assessed taxes for the value of the property.

TABLE C.1 (Cont.)

Document Date	Document Identity	No. of Pages	Document Description	Relevance to Property Boundaries
5/25/1976	Powhattan sewer easement	3	Indenture between the Chicago, Rock Island, and Pacific Railroad Company and the city of Powhattan to provide an easement through the railroad right-of-way for installation of a sewer line.	Although much of the right-of-way through Brown and Nemaha Counties had been abandoned (1/6/1967 document), the railroad retained its right-of way through Powhattan.
9/9/1981	Aerial photo	1	1981 aerial photo obtained by CCC/USDA. Photo ID 20013-181-104C.	No grain storage structures remain on the former CCC/USDA property. The easternmost portion of the former CCC/USDA property is being used for equipment storage, including drums and portable fertilizer tanks. No longer visible is the wooden elevator formerly located on co-op property east of the former railroad and north of the Quonset.
1/11/1984	Real estate mortgage and chattel security agreement by co-op	4	Real estate mortgage and chattel security agreement between the Brown County Cooperative Association and the Wichita Bank for Cooperatives shows payment of \$275,000 on 5/12/1982, with \$0 outstanding balance on the loan. Property used to secure the loan includes land and associated grain storage facilities along railroad right-of-way in Powhattan and Hiawatha. The agreement lists the land, equipment, and buildings on the properties.	Property in Powhattan includes land (1,110 ft x 200 ft x 1,110 ft x 200 ft, or 5.1 acres) east of the former railroad. Property also includes the feed mill equipment, elevator equipment, equipment in the Quonset, office equipment, and bulk fertilizer plant.
4/1/1986	Quitclaim deed between railroad and Dirt and Gravel, Inc.	6	Railroad right-of-way through many sections (except for parcels already conveyed) is sold by the railroad to Dirt and Gravel, Inc. Parcels on the right-of-way through Powhattan already conveyed include (1) the co-op property east of the railroad (200 ft x 1,110 ft, or 5.1 acre) conveyed on 2/25/1972; (2) the Chadwell property west of the railroad and north of the former CCC/USDA facility (170 ft x 500 ft x 150 ft x 575 ft, or 1.85 acre) conveyed on 10/18/1974; and (3) an undocumented 6.83 acres located in the northwest quarter and the southwest quarter of Section 28.	The undocumented 6.83-acre property is the remaining railroad right-of-way through Powhattan; it would include the former CCC/USDA property (see the 8/19/1986 and 12/5/1986 documents) and probably the parcel south of the Chadwell property (west of the railroad), as well as parcels north and south of the co-op (east of the railroad). The quitclaim deed shows that the railroad continued to be taxed for the value of the property after the 2/25/1972 transfer to the co-op and the 10/18/1974 transfer to Chadwell.

TABLE C.1 (Cont.)

Document Date	Document Identity	No. of Pages	Document Description	Relevance to Property Boundaries
8/19/1986	Deed between Dirt and Gravel, Inc., and co-op	2	Property west of the portion of the depot grounds that was sold to the co-op by the railroad on 2/25/1972 is now sold to the Brown County Farmers Co-op [ <i>sic</i> ] by Dirt and Gravel.	Property measures 625 ft x 100 ft x 675 ft x 110 ft, or 1.49 acres. The tract includes the northern portion of the former CCC/USDA property, which contained the grain structures visible in the 1966 aerial photograph.
12/5/1986	Quitclaim deed between Dirt and Gravel, Inc., and co-op	1	An additional parcel of the former railroad depot grounds is sold to the Brown County Co-op [ <i>sic</i> ] by Dirt and Gravel, Inc.	Property measures 465 ft x 340 ft x 320 ft x 300 ft. The tract includes the southern portion of the former CCC/USDA property, which did not contain grain structures, as well as property east of the former railroad.
2/29/1988	Kneisel interview with KDHE	2	Interview of Ralph Kneisel, long-term employee of the co-op, by KDHE personnel (KDHE 1988a).	The government storage area (the former CCC/USDA facility) consisted of approximately 30 bins that were constructed in 1949 and torn down in approximately 1966. The south elevator (on co-op property) was made of wood and was constructed in 1898 and torn down in 1978.
10/7/1991	Aerial photo	1	1991 aerial photo obtained by CCC/USDA. Photo ID NAPP-4229-17A.	The former CCC/USDA property is being used for temporary storage.
1/29/1997	FSA survey	5	The Brown County Farm Service Agency prepared the <i>Former CCC Grain Bin Storage Facilities Survey</i> form at the request of CCC/USDA to identify former grain storage operations. The "type of structure" is entered as "4 wood bins with wood floor," plus "4 aluminum bins and 21 steel bins with tin floors" (a total of 29 structures). However, the number of bins (including Quonset huts) is entered as 49, a number inconsistent with both the description and other observations.	The description of 29 structures on the FSA form is consistent with the Kneisel statement (KDHE 1988a) that approximately 30 structures were on the former CCC/USDA property. However, the total of 49 structures entered on the FSA form cannot be correct; at most, 43 structures are shown on former CCC/USDA property west of the railroad (1959 and 1966 aerial photos).

TABLE C.1 (Cont.)

Document Date	Document Identity	No. of Pages	Document Description	Relevance to Property Boundaries
10/26/1999	Certificate of amendment to articles of incorporation	4	The name of the Brown County Cooperative Association is changed to Ag Partners Cooperative, Inc.	The registered office of the association (capital stock valued at \$8,000,000) is in Hiawatha, Kansas.
2/21/2002	Aerial photo	1	2002 aerial photo obtained by CCC/USDA. Photo ID NAPP-12865-150A.	The former CCC/USDA property is being used for temporary storage.

<sup>a</sup> Reproduced documents follow table.



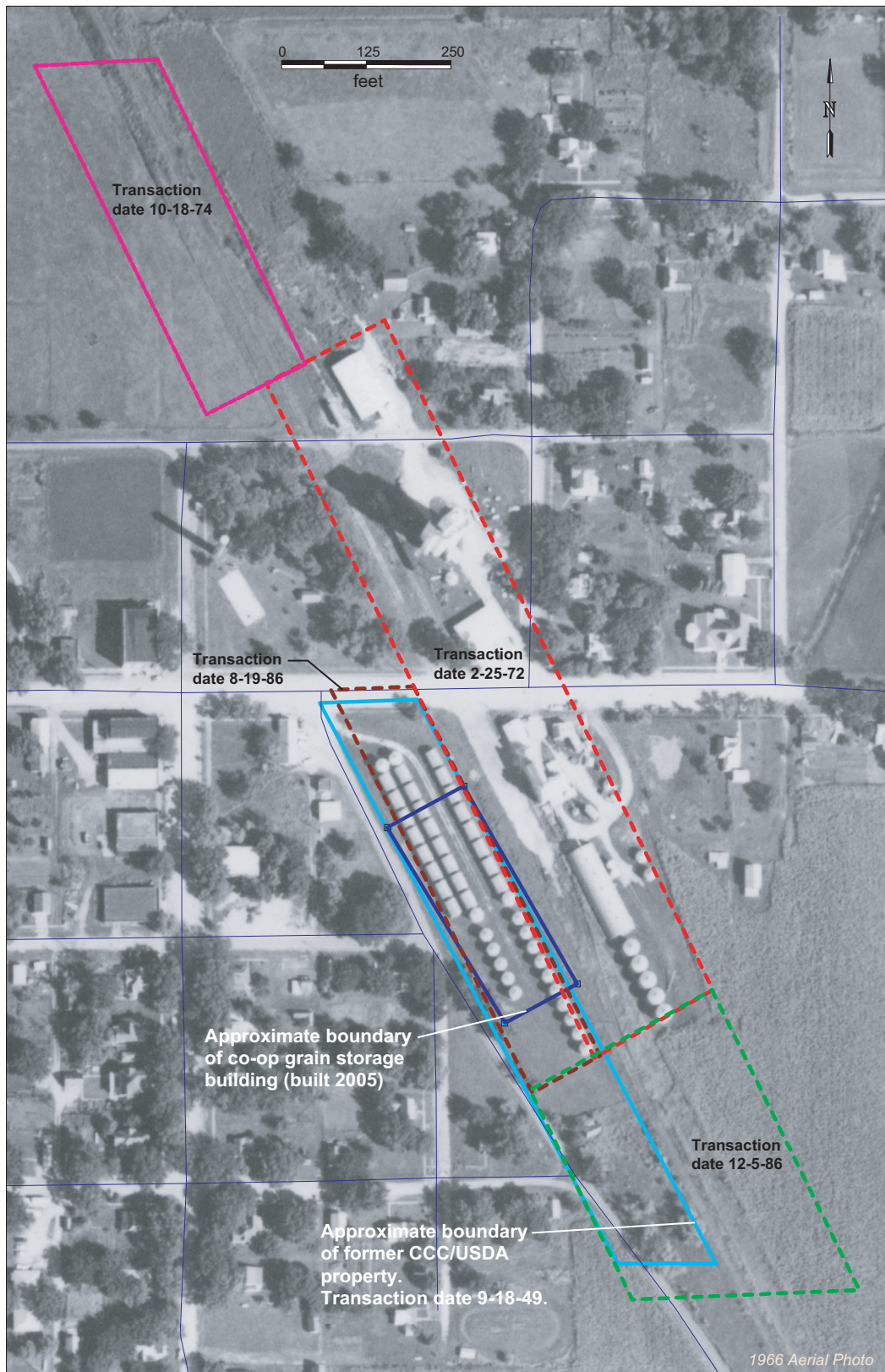


FIGURE C.1 Former CCC/USDA facility and historic leases at Powhattan.

J-602

State of Kansas)  
 Atchison County) *Be it remembered that on this 3<sup>d</sup> day of December, A.D.*  
 1868, before the undersigned, Notary Public of said County  
 of Atchison, personally came H. S. Butler personally known to me  
 to be the identical person whose name is affixed to the foregoing deed  
 as grantor, and before me acknowledged the same to be his own volun-  
 tary act and deed for the uses and purposes therein mentioned.  
 In witness whereof, I hereunto set my hand and affix my Notarial  
 seal at Office in said County on the day and year aforesaid.  
*David Patton*  
 Notary Public.

Filed for Record The United States of America. To all to whom these presents shall  
 come, Greeting: Whereas by the provisions of the fifth article of  
 the treaty concluded with the Kickapoo Indians June 12th 1862,  
 A. R. Platt U. S. Statutes Vol. 13, page 623, said Indians granted to the Atchison  
 and Pike's Peak Railroad Company, now the Central Branch  
 Union Pacific Railroad Company, under certain conditions  
 as set forth in said article, the privilege of buying the remainder  
 of their lands, within six months after the tract otherwise dis-  
 posed of by the treaty shall have been selected and set apart.  
 And Whereas the Secretary of the Interior under date of 23 August  
 1871, notified the Commissioners of the General Land Office  
 that the said Central Branch Union Pacific Railroad Company  
 is entitled under a contract dated August 16th 1865, and made  
 in accordance with the provisions of the said fifth article of  
 the aforesaid treaty to certain lands specified in an official  
 list accompanying said notification, the said Company hav-  
 ing paid the full amount due as purchase money for the  
 said lands and otherwise complied with the terms of the contract.  
 And Whereas the said Secretary directs in the aforesaid notification  
 that a patent shall issue to the said Central Branch Union  
 Pacific Railroad Company for the lands aforesaid, which  
 lands are described as follows, to wit:  
 South of the base line and East of the sixth principal meridian  
 Township 10th, South of Range 10th East.  
 Lot Eight of North West quarter of Section 4th containing  
 thirty one acres, and fifteen hundredths of an acre.  
 Lots six and seven of the South West quarter of Section 4th  
 containing twenty acres. All of section four, containing  
 four hundred and sixty two acres, and sixty hundredths of an  
 acre. All of section five, containing four hundred and  
 sixty four acres, and thirty six hundredths of an acre.  
 Section six, containing four hundred and forty acres.  
 Section seven, containing four hundred and forty acres.

Containing six hundred and Eighteen acres and twenty  
hundredths of an acre. - All of Section Eight. Containing  
six hundred and forty acres. All of Section Nine. Containing  
six hundred and forty acres. - All of Section Ten. Containing  
One hundred and thirty eight acres and forty hundredths  
of an acre. - All of Section Eleven. Containing one hundred  
and thirty seven acres and twenty four hundredths of an acre. -  
All of Section Twelve. Containing six hundred and forty acres.  
The North half of Section Thirteen. Containing four hundred  
and twenty acres. - The East half of the South East quarter  
of Section Thirteen. Containing Eighty acres. - The North half  
of the North East quarter of Section Eighteen. Containing  
Eighty acres. - The North half fractional of the North West  
quarter of Section Eighteen. Containing seventy four acres  
and twenty one hundredths of an acre. - The North East  
quarter of Section Nineteen. Containing one hundred  
and sixty acres. - The South half of Section Nineteen. Contain-  
-ing four hundred and seven acres and thirty eight hundr-  
-dths of an acre. - All of Section Twenty. Containing six hundred  
and forty acres. - All of Section Twenty one. Containing six hun-  
-dreds and forty acres. - Lots Six, six, seven and eight of Section  
Twenty two. Containing one hundred and thirty six acres and  
Eighty four hundredths of an acre. - Lots Six, six, seven, and  
Eight of Section Twenty three. Containing one hundred and  
thirty six acres and twenty eight hundredths of an acre. -  
All of Section Twenty eight. Containing six hundred and forty  
acres. All of Section Twenty nine. Containing six hundred and  
forty acres. All of Section Thirty. Containing six hundred and  
thirteen acres and sixteen hundredths of an acre. - All of Section  
Thirty one. Containing six hundred and Eleven acres and twelve  
hundredths of an acre. - All of Section Thirty two. Containing  
six hundred and forty acres. - All of Section Thirty three. Containing  
six hundred and forty acres. - Lots Six, six, seven, and Eight  
of Section Thirty four. Containing one hundred and thirty  
seven acres and ninety six hundredths of an acre. -

3-16 Township Four. South of Range Sixteen. East. -  
All of Section one. Containing four hundred and sixty six  
acres and eight hundredths of an acre. - All of Section two. Contain-  
-ing four hundred and sixty five acres and sixteen hundredths of  
an acre. - All of Section Three. Containing four hundred and sixty  
five acres and twenty eight hundredths of an acre. - All of Section  
Four. Containing four hundred and sixty nine acres and fifty  
two hundredths of an acre. - All of Section Five. Containing four  
hundred and seventy four acres. - All of Section six. Containing  
four hundred and seventy two acres and seventy nine hundredths  
of an acre. - All of Section seven. Containing six hundred and

four acres, and under hundredths of an acre. - All of Section Eight, Containing six hundred and forty acres. - All of Section nine Containing six hundred and forty acres. - All of Section Ten Containing six hundred and forty acres. - All of Section Eleven, Containing six hundred and forty acres. - All of Section Twelve, Containing six hundred and forty acres. - All of Section Thirteen Containing six hundred and forty acres. - All of Section Fourteen Containing six hundred and forty acres. - All of Section Fifteen Containing six hundred and forty acres. - All of Section Sixteen Containing six hundred and forty acres. - All of Section Seventeen Containing six hundred and forty acres. - All of Section Eighteen Containing six hundred and thirty three acres, and thirty six hundredths of an acre. - All of Section Nineteen, Containing six hundred and thirty four acres and sixteen hundredths of an acre. - All of Section Twenty Containing six hundred and forty acres. - All of Section Twenty one Containing six hundred and forty acres. - All of Section Twenty two Containing six hundred and forty acres. - All of Section Twenty three Containing six hundred and forty acres. - All of Section Twenty four Containing six hundred and forty acres. - All of Section Twenty five Containing six hundred and forty acres. - All of Section Twenty six Containing six hundred and forty acres. - All of Section Twenty seven Containing six hundred and forty acres. - All of Section Twenty eight Containing six hundred and forty acres. - All of Section Twenty nine Containing six hundred and forty acres. - All of Section Thirty Containing six hundred and thirty one acres and eighty eight hundredths of an acre. - All of Section Thirty one Containing six hundred and thirty two acres and forty hundredths of an acre. - All of Section Thirty two Containing six hundred and forty acres. - All of Section Thirty three, Containing six hundred and forty acres. - All of Section Thirty four Containing six hundred and forty acres. - All of Section Thirty five, Containing six hundred and forty acres. - All of Section Thirty six Containing six hundred and forty acres. -

4-16

Township Four, South of Range Sixteen East. - The North East quarter of Section one Containing one hundred and thirty acres. - The North East quarter of the North West quarter of Section one Containing forty acres. - The West half of Section Two, Containing three hundred and eighty acres, and forty one hundredths of an acre. - The South half of the South East quarter of Section five, Containing eight acres. - All of Section Three, Containing six hundred and thirty one acres and twenty eight hundredths of an acre. - All of Section Four Containing six hundred and forty acres. -



All of Section Eleven. Containing six hundred and forty acres. — The South West quarter of the North West quarter of Section Twelve. Containing forty acres. — The South East quarter of the South quarter of Section Twelve. Containing forty acres. — The South West quarter of the South West quarter of Section Twelve. Containing forty acres. — The North West quarter of the North West quarter of Section Thirteen. Containing forty acres. — The West half of the South West quarter of Section Thirteen. Containing eighty acres. — All of Section Fourteen. Containing six hundred and forty acres. — All of Section Fifteen. Containing six hundred and forty acres. — All of Section Twenty two. Containing six hundred and forty acres. — The North half of the North East quarter of Section Twenty three. Containing eighty acres. — The West half of Section Twenty three. Containing three hundred and twenty acres. — The North West quarter of the North East quarter of Section Twenty four. Containing forty acres. — The South half of the North East quarter of Section Twenty four. Containing eighty acres. — The North West quarter of Section Twenty four. Containing one hundred and sixty acres. — The South half of Section Twenty four. Containing three hundred and twenty acres. — The North half of Section Twenty five. Containing three hundred and twenty acres. — The North half of the South East quarter of Section Twenty five. Containing eighty acres. — The South West quarter of the South East quarter of Section Twenty five. Containing forty acres. — The South West quarter of Section Twenty five. Containing one hundred and sixty acres. — All of Section Twenty six. Containing six hundred and forty acres. — All of Section Twenty seven. Containing six hundred and forty acres. — All of Section Thirty four. Containing six hundred and forty acres. — All of Section Thirty five. Containing six hundred and forty acres. — The North West quarter of the North East quarter of Section Thirty six. Containing forty acres. — The South half of the North East quarter of Section Thirty six. Containing eighty acres. — The North West quarter of Section Thirty six. Containing one hundred and sixty acres. — The South half of Section Thirty six. Containing three hundred and twenty acres. —

Township Five, South of Range Sixteen, East. —

All of Section one Containing six hundred and thirty six acres. — All of Section Two. Containing six hundred and thirty five acres and twenty hundredths of an acre. — All of Section Three. Containing six hundred and forty acres and forty hundredths of an acre. — The North half of Section Four. Containing three hundred and twenty two acres and ninety six hundredths of an acre. All of Section Six. Containing six hundred and thirty six acres. —

All of Section Seven, Containing Six hundred and thirty seven  
acres, and twenty hundredths of an acre. - The North west quarter  
of Section Eight, Containing One hundred and sixty acres. -  
The South half of Section Eight, Containing Four hundred  
and twenty acres. - The South half of Section Nine, Containing  
Four hundred and twenty acres. - All of Section Ten, Contain-  
ing Six hundred and forty acres. - All of Section Eleven, Con-  
taining Six hundred and forty acres. - All of Section Twelve,  
Containing Six hundred and forty acres. - All of Section  
Thirteen, Containing Six hundred and forty acres. - All of  
Section Fourteen, Containing Six hundred and forty acres. -  
All of Section Fifteen, Containing Six hundred and forty acres. -  
All of Section Sixteen, Containing Six hundred and forty acres. -  
All of Section Seventeen, Containing Six hundred and forty acres. -  
All of Section Eighteen, Containing Six hundred and thirty six acres. -  
All of Section Nineteen, Containing Six hundred and thirty six acres. -  
All of Section Twenty, Containing Six hundred and forty acres. -  
All of Section Twenty one, Containing Six hundred and forty acres. -  
All of Section Twenty two, Containing Six hundred and forty acres. -  
All of Section Twenty three, Containing Six hundred and forty acres. -  
All of Section Twenty four, Containing Six hundred and forty  
acres. - All of Section Twenty five, Containing Six hundred and  
forty acres. - All of Section Twenty six, Containing Six hundred  
and forty acres. - All of Section Twenty seven, Containing Six  
hundred and forty acres. - All of Section Twenty eight, Con-  
taining Six hundred and forty acres. - All of Section Twenty  
nine, Containing Six hundred and forty acres. - All of Section  
Thirty, Containing Six hundred and thirty eight acres,  
and eight hundredths of an acre. - All of Section Thirty one  
Containing Six hundred and thirty nine acres, and Sixty  
eighth hundredths of an acre. - All of Section Thirty two,  
Containing Six hundred and forty acres. - All of Section  
Thirty three, Containing Six hundred and forty acres. -  
All of Section Thirty four, Containing Six hundred and forty  
acres. - All of Section Thirty five, Containing Six hundred and  
forty acres. - All of Section Thirty six, Containing Six hundred  
and forty acres.

- Township Six, South of Range Sixteen East. -  
All of Section One, Containing Seven hundred and Eighteen  
acres, and Eighty hundredths of an acre. - All of Section Two, Con-  
taining Seven hundred and Eighteen acres, and Eighty  
hundredths of an acre. - All of Section Three, Containing Seven  
hundred and twenty acres, and eight hundredths of an acre. -  
All of Section Four, Containing Seven hundred and twenty one  
acres, and thirty two hundredths of an acre. - All of Section  
Five, Containing Seven hundred and twenty seven acres, and eight  
hundredths of an acre. - All of Section Six, Containing Seven

hundred and Eighty three aces. and forty hundredths of an  
 acre. - Lots Six. Six. and Seven. of Section Eight. Containing  
 ninety one aces. and fourteen hundredths of an acre. -  
 All of Section Nine. Containing Four hundred and twenty  
 aces. and ninety two hundredths of an acre. - All of Section  
 Ten. Containing One hundred and fifty one aces. and  
 sixty four hundredths of an acre. - All of Section Eleven  
 Containing Six hundred and forty aces. - All of Section  
 Twelve. Containing Six hundred and forty aces. - All  
 of Section Thirteen. Containing Four hundred and sixty  
 five aces. and twenty two hundredths of an acre. -  
 Lots One. Six. and Seven. of Section Fourteen. Containing one  
 hundred and forty four aces. and eighty hundredths of an  
 acre. - Lot one of North East quarter of Section Fifteen  
 Containing one acre and Eighty four hundredths of an  
 acre. -

3-15  
 \* Township Three. South of Range Fifteen East. -  
 All of Section One. Containing Four hundred and twenty six  
 aces. - All of Section Two. Containing Four hundred and  
 twenty six aces and twenty four hundredths of an acre. -  
 All of Section Three. Containing Four hundred and twenty  
 four aces. and twenty eight hundredths of an acre. - All of  
 Section Ten. Containing One hundred and ten aces. and  
 thirty two hundredths of an acre. - All of Section Eleven. Con-  
 taining Six hundred and forty aces. - All of Section Twelve.  
 Containing Six hundred and forty aces. - All of Section  
 Thirteen. Containing Six hundred and forty aces. - All of  
 Section Fourteen. Containing Six hundred and forty aces. -  
 All of Section Fifteen. Containing One hundred and sixteen  
 aces. and twenty hundredths of an acre. - All of Section Twenty  
 two. Containing One hundred and twenty one aces. and  
 twenty eight hundredths of an acre. - All of Section Twenty  
 three. Containing Six hundred and forty aces. - All of Section  
 Twenty four. Containing Six hundred and forty aces. -  
 All of Section Twenty five. Containing Six hundred and forty  
 aces. - All of Section Twenty six. Containing Six hundred  
 and forty aces. - All of Section Twenty seven. Containing One  
 hundred and twenty eight aces. and twenty two hundredths of  
 an acre. - All of Section Thirty four. Containing One hundred  
 and thirty five aces. and Eighty four hundredths of an acre. -  
 All of Section Thirty five. Containing Six hundred and forty aces. -  
 All of Section Thirty six. Containing Six hundred and forty aces. -

4-15  
 Township Four South of Range Fifteen East. -

All of Section One. Containing One hundred and twenty eight aces.  
 and twenty four hundredths of an acre. - All of Section Two. Con-  
 taining One hundred and forty five aces. and eight hundredths of an acre. -

All of Section fifteen. Containing six hundred and fifty five acres and forty eight hundredths of an acre. - All of Section twenty two. Containing six hundred and fifty nine acres and sixty hundredths of an acre. - All of Section twenty seven. Containing six hundred and sixty four acres and eighty eight hundredths of an acre. - All of Section thirty four. Containing six hundred and twenty one acres and forty eight hundredths of an acre.

Township Six South of Range Fifteen East. -

All of Section one. Containing six hundred and forty acres and forty hundredths of an acre. - All of Section two. Containing six hundred and forty three acres and sixty hundredths of an acre. - All of Section three. Containing six hundred and seventy nine acres and forty nine hundredths of an acre. - All of Section four. Containing six hundred and eighty acres and forty hundredths of an acre. - All of Section eleven. Containing six hundred and forty acres. - All of Section twelve. Containing six hundred and forty acres. - All of Section thirteen. Containing six hundred and forty acres. - All of Section fourteen. Containing six hundred and forty acres. - All of Section fifteen. Containing six hundred and eighty three acres and twenty eight hundredths of an acre. - All of Section twenty two. Containing six hundred and eighty eight acres. - All of Section twenty three. Containing six hundred and forty acres. - All of Section twenty four. Containing six hundred and forty acres. - All of Section twenty five. Containing six hundred and forty acres. - All of Section twenty six. Containing six hundred and forty acres. - All of Section twenty seven. Containing six hundred and forty three acres and sixty eight hundredths of an acre. - All of Section thirty four. Containing six hundred and sixty acres and twenty hundredths of an acre. - All of Section thirty five. Containing six hundred and forty acres. - All of Section thirty six. Containing six hundred and forty acres.

Township Six South of Range Fifteen East. -

All of Section one. Containing six hundred and forty two acres and eighty four hundredths of an acre. - Lots six, seven, and eight of Section two. Containing one hundred and four hundredths of an acre.

Township Four South of Range Seventeen East. -

Lots six, seven, and eight of Section three. Containing one hundred and thirty nine acres and twenty one hundredths of an acre. - All of Section four. Containing six hundred and forty acres and forty hundredths of an acre. - All of Section five. Containing six hundred and forty three acres and sixty eight hundredths of an acre.



All of Section Six. Containing six hundred and ten acres and sixty eight hundredths of an acre. - The North half of Section Seven. Containing three hundred and five acres and twelve hundredths of an acre. - The South East quarter of Section Seven. Containing one hundred and sixty acres. - All of Section Eight. Containing six hundred and forty acres. - All of Section Nine. Containing six hundred and forty acres. - Lots Six, Six, Seven and Eight of Section Ten. Containing one hundred and thirty five acres and forty hundredths of an acre. - Lots Six, Six, Seven, and Eight of Section Eleven. Containing one hundred and thirty nine acres. - All of Section Sixteen. Containing six hundred and forty acres. - All of Section Seventeen. Containing six hundred and forty acres. - The East half of Section Eighteen. Containing three hundred and twenty acres. - The North half fractional of the South West quarter of Section Eighteen. Containing twenty two acres and twenty nine hundredths of an acre. - The South East quarter of the South West quarter of Section Eighteen. Containing forty acres. - The East half of the North East quarter of Section Nineteen. Containing eighty acres. - The North East quarter of the South East quarter of Section Nineteen. Containing forty acres. - The South half of the South East quarter of Section Nineteen. Containing eighty acres. - All of Section Twenty. Containing six hundred and forty acres. - All of Section Twenty one. Containing six hundred and forty acres. - Lots Six, Six, Seven and Eight of Section Twenty two. Containing one hundred and forty acres. - Lots Six, Six, Seven, and Eight of Section Twenty three. Containing one hundred and forty eight acres and thirty six hundredths of an acre. - All of Section Twenty eight. Containing six hundred and forty acres. - All of Section Twenty nine. Containing six hundred and forty acres. - The North East quarter of Section Thirty. Containing one hundred and sixty acres. - The West half fractional of the South West quarter of Section Thirty. Containing thirty nine acres and thirty nine hundredths of an acre. - The South West quarter of the North East quarter of Section Thirty one. Containing forty acres. - The South West quarter fractional of Section thirty one. Containing one hundred and forty six acres and fifty two hundredths of an acre. - The North East quarter of Section Thirty two. Containing one hundred and sixty acres. - The North East quarter of the South East quarter of Section Thirty two. Containing forty acres. - The North half of Section Thirty three. Containing three hundred and twenty acres. - Lots Seven, and Eight of Section Thirty four. Containing twenty seven acres and twenty two hundredths of an acre. - Township Six South of Range Seventy. - Lot Six of Section thirty four. Containing forty

fifty seven hundredths of an acre. - The South half of the South  
 East quarter of Section Four. Containing Eighty acres. - The South  
 West quarter of the North West quarter of Section Five. Containing  
 forty acres. - The South West quarter of Section Five. Containing  
 one hundred and sixty acres. - The South half of the North East  
 quarter of Section Six. Containing Eighty acres. - The North West  
 quarter fractional of Section Six. Containing one hundred  
 and forty five acres, and seventy two hundredths of an acre. -  
 The South half of Section Six. Containing three hundred and  
 six acres and fifty two hundredths of an acre. - All of Section  
 Seven. Containing six hundred and sixteen acres, and  
 thirty two hundredths of an acre. - The West half of the North  
 East quarter of Section Eight. Containing Eighty acres. - The North  
 West quarter of Section Eight. Containing one hundred and  
 sixty acres. - The South half of Section Eight. Containing three  
 hundred and twenty acres. - The North East quarter of Section  
 Nine. Containing one hundred and sixty acres. - The South  
 half of Section Nine. Containing three hundred and twenty  
 acres. - Lots One, Four, Five and Six, of Section Ten. Containing  
 one hundred and seventy six acres, and seventy two hund-  
 redths of an acre. - Lots One, Four, and Five of Section  
 Eleven. Containing one hundred and thirty six acres, -  
 and Five hundredths of an acre. - The North of Section  
 Sixteen. Containing three hundred and twenty acres. -  
 All of Section Seventeen. Containing six hundred and forty  
 acres. - All of Section Eighteen. Containing six hundred  
 and twenty five acres, and twenty eight hundredths of  
 an acre. - All of Section Nineteen. Containing six hundred  
 and twenty five acres, and Eighty eight hundredths of an  
 acre. - All of Section Twenty. Containing six hundred  
 and forty acres. - All of Section Twenty one. Containing  
 six hundred and forty acres. - Lots One, Four, Five  
 and Six, of Section Twenty two. Containing one hundred  
 and Eighty nine acres, and forty eight hundredths of  
 an acre. - Lots One, Four, Five and Six, of Section Twenty  
 three. Containing one hundred and thirty three acres, and  
 fifteen hundredths of an acre. - All of Section Twenty Eight  
 Containing six hundred and forty acres. - All of Section Twenty  
 Nine. Containing six hundred and forty acres. - All of Section  
 Thirty. Containing six hundred and thirty five acres, and  
 Eighty hundredths of an acre. - The North half of Section thirty  
 one. Containing three hundred and sixteen acres, and ten  
 hundredths of an acre. - The West half of the South East  
 quarter of Section Thirty one. Containing Eighty acres. -  
 The South West quarter of Section Thirty one. Containing  
 one hundred and fifty five acres, and seventy hundredths  
 of an acre. - The North half of Section Thirty two. Containing

One hundred and twenty acres. - The South East quarter of Section Thirty two. Containing one hundred and sixty acres. All of Section Thirty three. Containing six hundred and forty acres. - Lots One, four, five, and six, of Section Thirty four, Containing one hundred and thirty seven acres, and thirty six hundredths of an acre. -

Township Six, South of Range Seventeen East. - Lot Eight of Section Four. Containing thirty four acres and fifty five hundredths of an acre. - The West half of Section Four. Containing Four hundred and twenty eight acres and forty four hundredths of an acre. The North half fractional of the North East quarter of Section Four. Containing thirty two acres and forty one hundredths of an acre. - The South West quarter of the North East quarter of Section Four. Containing thirty acres. - The West half of Section Four. Containing One hundred and thirty seven acres, and forty seven hundredths of an acre. - All of Section Five. Containing six hundred and eighty acres and eighty hundredths of an acre. - All of Section Six. Containing six hundred and forty nine acres and sixty four hundredths of an acre. - All of Section Seven. Containing One hundred and eighty six acres and twenty eight hundredths of an acre. - The North East quarter of Section Eight. Containing one hundred and sixty acres. - The North East quarter of the North West quarter of Section Eight. Containing thirty acres. - The South half of Section Nine. Containing One hundred and twenty acres. - All of Section Ten. Containing Four hundred and twenty two acres and thirty two hundredths of an acre. - All of Section Eleven. Containing Four hundred and eighty nine acres and sixty hundredths of an acre. - The North East quarter of Section Eleven. Containing one hundred and sixty acres. - The South half of Section Eleven. Containing One hundred and twenty acres. - The North West quarter of the North East quarter of Section Seventeen. Containing thirty acres. - The South half of the North East quarter of Section Seventeen. Containing thirty acres. - The North West quarter of Section Seventeen. Containing one hundred and sixty acres. - The South half of Section Seventeen. Containing One hundred and twenty acres. - All of Section Eighteen. Containing One hundred and twenty eight acres and thirty four hundredths of an acre. - Lot One of Section Nineteen. Containing six acres and thirty two hundredths of an acre. - Lots Four, five, six, and seven of Section Twenty. Containing one hundred and twenty three acres, and fifty six hundredths of an acre. - The North East quarter of the North East quarter of Section Twenty. Containing thirty acres. - All of Section

Twenty one. Containing three hundred and eighty four acres and twenty eight hundredths of an acre. - All of Section Twenty two. Containing four hundred and forty six acres and twenty one hundredths of an acre. - Lot three of Section Twenty four. Containing one acre and thirty one hundredths of an acre. - Making a total of one hundred and twenty three thousand, eight hundred and thirty two acres and thirty one hundredths of an acre. Now know ye, that the United States of America in consideration of the premises and pursuant to the said treaty and the order of the said Secretary of the Interior have given and granted, and by these presents do give and grant unto the said, Central Branch Union Pacific Railroad Company, formerly the Atchison and Pitts Peak Railroad Company and to its lawful successors and assigns the tracts of land herein described, To have and to hold, the said tracts with the appurtenances thereto unto the said Central Branch Union Pacific Railroad Company and to its successors and assigns forever.

In Testimony whereof I Ulysses S. Grant President of the United States of America have caused these letters to be made Patent and the Seal of the General Land Office to be hereunto attached.

Given under my hand at the City of Washington the fifth day of September in the year of our Lord one thousand eight hundred and seventy one and of the Independence of the United States the thirty sixth.

By the President, U. S. Grant.

By E. P. Brighton, Secretary  
Recorder of the General Land Office.

Recorded Vol. 2. Page 777

## RECORD OF DEEDS.

GRIPPER  
WARRANTY DEED.

Filed for record this 14<sup>th</sup> day of May A. D. 1878 at 10 o'clock A. M.  
Ed. Sullivan Recorder.  
Dputy.

Deed No. 921Register No. 676

KNOW ALL MEN BY THESE PRESENTS, That the CENTRAL BRANCH UNION PACIFIC RAILROAD COMPANY, Grantor, for and in consideration of the sum of Five Hundred and Forty DOLLARS to it in hand paid by David Keiden

of the State of Kansas, grantee, (the receipt of which is hereby acknowledged,) doth hereby GRANT, BARGAIN, SELL AND CONVEY unto the said David Keiden grantee, the following described real estate lying and being in the County of Butler and State of Kansas, and described as follows, to wit: Five Quarter West Quarter of Section No. 25, in Township No. 33 N. of Range No. 16 E. 1/4 containing, according to the United States Survey, One Hundred and Sixty (60) ACRES, be the same more or less, reserving, however, the Right of Way to the said Railroad Company, two hundred feet wide, where the track of said Railroad has been laid over said land.

\* Except taxes or assessments which have accrued subsequent to the 1<sup>st</sup> day of February 1869, being the date of the contract pursuant to the provisions of which this deed is issued and except all liens and incumbrances of whatever character, placed upon said premises subsequent to the aforementioned date by other than the Grantor herein.

TO HAVE AND TO HOLD to the said grantee and his Heirs and Assigns forever, to their own use and behoof: And the said grantor doth hereby covenant with the said grantee that, at the enrolling of these presents, it hath good right to sell the same as is above written: And furthermore, the said grantor doth hereby covenant with the said grantee, his Heirs and Assigns, their peaceable possession of the said premises against all and every person and persons whomsoever, lawfully claiming or to claim the same, and against all liens, taxes, assessments, and incumbrances whatsoever, to WARRANT and by these presents FOREVER DEFEND.

IN WITNESS WHEREOF, the said Grantor hath set its Corporate seal and caused its corporate name to be signed by its President, and countersigned by the Land Commissioner, this 10<sup>th</sup> day of October A. D. 1877.

CENTRAL BRANCH UNION PACIFIC RAILROAD COMPANY.

By Ed. Sullivan President.W. F. Brown

Land Commissioner.

State of Kansas  
County of Butler  
City of Atchison

Before Me, J. Garride a Notary Public, this day came the Central Branch Union Pacific Railroad Company, by Ed. Sullivan its President, who is personally known to me to be the identical person whose name is subscribed to the within Deed, as having executed the same, as the President of said Company the Grantor therein, and who then and there acknowledged the same to be the voluntary act and deed of said company, and his own voluntary act and deed as the President thereof; and that the seal of said Company was affixed thereto by order of said Company.

In witness whereof, I have set my Hand and Notarial Seal, this 10<sup>th</sup> day of October A. D. 1877

J. Garride Notary Public.

and clear of any incumbrances done or suffered by them or those under whom they claim, and that they will Warrant and forever Defend the same unto said party of the second part its successors and assigns, against said party of the first part their heirs, and all and every person or persons whomsoever lawfully claiming or to claim the same.

In Witness Whereof the said party of the first part have hereunto set their hands the day and year first above written.

signed and delivered in presence of } Henry Meibach  
Alvena Meibach

State of Kansas, Brown County, ss.

Be it Remembered, that on this 31<sup>st</sup> day of August A.D. 1886, before me, the undersigned a Notary Public in and for the County and State aforesaid, came Henry Meibach and Alvena Meibach his wife who are personally known to me to be the same persons who executed the within instrument of writing, and such persons have duly acknowledged the execution of the same.

In Testimony Whereof I have hereunto set my hand and affixed my Notarial Seal, the day and year last above written.

(Seal)

J. H. Klinefelter  
Notary Public  
Term Expires Jan'y 19<sup>th</sup> 1889.

No 62.

Presented  
Filed for Record  
and duly signed  
at 2 o'clock  
P. M.  
McKham  
Register.

This Indenture Made this 20<sup>th</sup> day of August A.D. 1886, between J. A. Holcomb and Annie Holcomb his wife of Brown County, in the State of Kansas of the first part, and The Chicago, Kansas and Nebraska Railway Company, a corporation organized under the laws of the State of Kansas, of the second part.

Witnesseth, that said party of the first part, in consideration of the sum of Four Hundred and no Dollars, the receipt whereof is hereby acknowledged, do by their presents grant, bargain, sell, and convey unto said party of the second part, its successors and assigns, all the following described Real Estate, situated in the County of Brown and State of Kansas, to-wit:

A strip of land One Hundred feet wide, of which the center line of the route and line of the Chicago, Kansas and Nebraska Railway Company, as the same is now surveyed, staked and located, is the center line of the strip, and the ends of the strip

line of said route, over, across and through the following described tracts of land, as said route and line of said railway passes through the same, to-wit:

The South west quarter of section Twenty-eight (28) in <sup>Range</sup> Three (3) of Range Sixteen (16) East of the 6th Principal Meridian together with all such additional or extra ground out of the lands of the said grantor or grantors, adjoining such strip of land hereby conveyed, as said Company may at any time require, to be paid for by said Company at the price per acre paid for said strip.

And said Railway Company may, through its agents, employees, servants or contractors encroach upon the adjoining lands outside of the limits above mentioned to which said grantor or grantors have title or possession, for the purpose of building or constructing its road-bed and railroad, and of completing and trimming its cuts and fills, and for all other purposes, for the building, constructing or maintaining its road-bed, or of maintaining its railroad.

And said Railway Company, its successors or assigns, may at any and all times between the first day of November and the fifteenth day of March of each year, erect and maintain snow fences on the lands now owned by said grantor or grantors, not more than two hundred feet north or west of the center line of said railroad, and may remove such snow fences at pleasure, but shall only suffer them to remain on the lands of such grantor or grantors during the time herein limited.

To Have and To hold the Same, together with all and singular the tenements, hereditaments and appurtenances thereto belonging or in any wise appertaining, forever.

And said S. O. Holcomb and Annie Holcomb his wife for themselves, their heirs, executors or administrators, do hereby covenant, promise and agree, to and with said party of the second part, that at the delivery of these presents they are lawfully seized in their own right of an absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular the above granted and described premises, with appurtenances; that the same are free and clear of any incumbrances done or suffered by them or those under whom they claim. And that they will warrant and forever defend.



the same unto said party of the second part, its successors and assigns, against said party of the first part, their heirs, and all and every person or persons whosoever lawfully claiming or to claim the same.

In Witness Whereof, the said party of the first part have hereunto set their hands the day and year first above written.

signed and delivered in presence of S. A. Holcomb

Annie Holcomb

State of Kansas, Brown County, ss.

Be it Remembered, That on this 20th day of August A.D. 1886, before me the undersigned, a Notary Public, in and for the County and State aforesaid, came S. A. Holcomb and Annie Holcomb his wife, who are personally known to me to be the same persons who execute the within instrument of writing, and such persons have duly acknowledged the execution of the same.

In Testimony Whereof, I have hereunto set my hand and affixed my Notarial Seal, the day and year last above written.

Seal.

J. K. Klinefelter  
Notary Public, Term Expires Jan'y 19<sup>th</sup> 1889.

Warranted and  
filed for Record  
on Aug. 28<sup>th</sup>  
1886 at 2  
O'clock P.M.  
W. H. Ham  
Register

No. 63

This Indenture, made this 21st day of August, A.D. 1886, between Martin Bender and Lydia Bender his wife of Brown County, in the State of Kansas of the first part, and The Chicago, Kansas and Nebraska Railway Company, a corporation organized under the laws of the State of Kansas, of the second part.

Witnesseth, That said party of the first part, in consideration of the sum of Five Hundred Eighty-six and 7/10 Dollars, the receipt whereof is hereby acknowledged, do by these presents grant, bargain, sell, and convey unto said party of the second part, its successors and assigns, all the following described Real Estate, situated in the County of Brown and State of Kansas, to-wit:

A strip of land One Hundred feet wide, of which the center line of the route and line of the Chicago, Kansas and Nebraska Railway Company, as the same is now surveyed, staked and located, is the center, being fifty feet each side of the center line of said route, over, across, and through the following described tracts

Kansas.gov: The Official Web site of the State of Kansas

**Kansas Online  
Business Entity Search**[Business Entity Search](#)**Kansas Secretary of State  
Business Entity Search**[Helpful Hints](#)Business Entity ID Number: **1062942**[Privacy Statement](#)[Certificate of Good Standing](#)[Contact Info](#)[Letter of Good Standing](#)[Online Demo](#)**BROWN COUNTY CO-OPERATIVE ASSOCIATION**[< KSOS Web site](#)

HIAWATHA, KS 66434

[< Kansas Web site](#)

---

Close Corp [N]  
Tax Year End [12]  
Date of Incorporation [12/10/1890]  
Last Correct Annual Report [00/0000]  
Next Annual Report Due Date [00/00/0000]  
Extension [00/00/0000]  
Forfeiture [12/31/1911]  
Expiration [12/31/9999]  
State/Country Formation [KS]

---

**Resident Agent**

NONE SHOWN

, 00000-0000

**Business Entity Type**

DOM:NOT FOR PROFIT CORPORATION

**Business Entity Status**

FORFEITED - FAILED TO TIMELY FILE A/R

# 1891 GRAIN DEALERS AND SHIPPERS GAZETTEER — CHICAGO, ROCK ISLAND, AND PACIFIC RAILROAD, PART 2<sup>a</sup>

CITY, STATE	DEALER/SHIPPER	CITY, STATE	DEALER/SHIPPER
ILLINOIS		IOWA (cont.)	
MINERAL, ILL.	Dewey, W. W. & Co.	MONTEITH, IA.	Counselman, C. & Co.
MINOOKA, ILL.	Knapp, A. K.		Reed, H. T.
MOKENA, ILL.	Knapp, A. K.	MOORLAND, IA.	Chase, L. M.
MORRIS, ILL.	Hall, W. N.		Pollock, S. M.
NEW LENNOX, ILL.	Hilton, S. H.	MOSCOW, IA.	Schafnit, G. F.
OTTAWA, ILL.	Gilbert, H. S.		Walker & Co.
	Penny, G. E.	MOSSVILLE, IA.	Cochran, M.
	Sheeler, J. N.		Hoyt, F.
	So. Ottawa El. Co.	MT. ZION, IA.	Baker Bros.
PEORIA, ILL.	Advance El. Co.	MUSCATINE, IA.	Block, W. G.
	Central City El. Co.		Muscatine Oatmeal Mill & Elevator Co.
	Iowa El. Co.		Counselman, C. & Co.
	Mills Bros.	NEOLA, IA.	Dillin, C. D.
	P & P. U. El. Co.		Remington Bros.
	Phode, Jno.	NEWTON, IA.	Counselman, C. & Co.
	Standard Malt & Grain Co.		Newton El. Co.
	Union El. Co.	NOBLETON, IA.	(P. O. Mitchellville, Ia.)
	Walker, G. N. & Co.		Tower & Ladd
PERU, ILL.	Bowers, Peter	OAKLAND, IA.	(Pottawottamie Co.)
PUTNAM, ILL.	Carroll, R.		Freeman, L. E.
ROME, ILL.	Croctor, A. S.		Hancock, Hodgson & Co.
SENECA, ILL.	Graves & Johnson		South Branch El. Co.
	Hogan & Nelson	OSKALOOSA, IA.	Sheak, J. H.
SHEFFIELD, ILL.	Williams, B. F.	OTLEY, IA.	Hendershot, I. B.
SOUTH CHICAGO, ILL.	Deasy, W. J. & Co.	OTTUMWA, IA.	Baker, N.
	Fiske, Thomas & Co.		Jones & Buchanan
	Kendall, E. E.	OXFORD, IA.	Counselman, C. & Co.
	Peterman, J. P.		Hill, J. F.
	Willing, A. J. & Co.		Linebarger, L. & H.
SPARLAND, ILL.	Riddell, Wm.		McCleery, H.
TISKILWA, ILL.	Sheldon, A. H.		Wolfe & Mavin
UNDERWOOD, ILL.	Counselman, C. & Co.	PATON, IA.	Counselman, C. & Co.
	Dillin, C. D.		Cowan, J. T.
UTICA, ILL.	Corbin, J. H.	PATTERSON, IA.	(Madison Co.)
	Gilbert, H. S.		Pattison, Alex
	Pulsifer, E. F.	PELLA, IA.	Clark, G. T.
WYANET, ILL.	Meetler, H. H.		Edmond, T. J.
			Huber, D. S.
INDIAN TERRITORY			Vanderzyl Bros.
MINCO, I. TER.	Morris, Wm.	PERRY, IA.	Breed, Allen
UNION CITY, I. TER.	(P. O. Union, I. Ter.)		Heaton, George
	Ladd, T. C.	PLEASANT PLAIN, IA.	Crumly, A. L.
	Phirps, W. C.	PLOVER, IA.	Charlton, C. H.
			Counselman, C. & Co.
IOWA		PRAIRIE CITY, IA.	Gill, J. R. & Son
MENLO, IA.	Counselman, C. & Co.		Norris, B. F.
	Curtis, W. H.	REASNOR, IA.	Counselman, C. & Co.
	Sanborn, M. J.		Wilson, W. O. & Co.
	Wells, Ben	RIPPEY, IA.	Leake, W. J.
METZ, IA.	Newton El. Co.	ROLFE, IA.	Wiswell, E. R.
MINBURN, IA.	Crawford, Mat.	ROSE HILL, IA.	France, H. C. & Co.
	Gribben, M. W.	RUTHVEN, IA.	Alger, Perry
MINDEN, IA.	Blumer, S.		Helgen & Co.
	Dow, J. L. & Co.	SAND PRAIRIE, IA.	(P. O. Vincennes, Ia.)
	Ehlers, P.		Allen, D. R.
MITCHELLVILLE, IA.	Counselman, C. & Co.	SELMA, IA.	Pepper, J. S.
	Miller, Peter	SEYMOUR, IA.	Keller, A. H.
MONROE, IA.	Elevator Co.	SHELBY, IA.	(Shelby Co.)
	Murray, Thos. & Co.		Abbott & Cooper
			Dow, Josiah & Co.
			Stockdale & Deitz

CITY, STATE	DEALER/SHIPPER
IOWA (cont.)	
SIGOURNEY, IA.	First National Bank Ridale, L. P.
SOUTH AMANA, IA.	Amana Society
SPRING HILL, IA.	Mott, L.
STOCKTON, IA.	Highley & Bierkamp
STUART, IA.	Lawbaugh, H. Stuart, Mrs. L. G.
TARA, IA.	Counselman, C. & Co.
TIFFIN, IA.	Wolfe, Wm.
UNIONVILLE, IA.	Barnett & Vermillion
VAN METER, IA.	Mott, L.
VICTOR, IA.	Counselman, C. & Co. Patrick & Hunt Simpson, Jas.
VINCENT, IA.	(P. O. Washington, Ia.) Conway, Jas. R.
WALCOTT, IA.	(P. O. Wolcott, Ia.) Stockdale & Dietz Werner, A.
WALNUT, IA.	Counselman, C. & Co. Grantz, Gloe & Ott Negley & Wilson Spangler & Schofield
WASHINGTON, IA.	Blair, E. Hale, A. C.
WAUKEE, IA.	Center & Morris Cline & Moore Morrison, M. E. Smith, Spencer
WEST CHESTER, IA.	Bleroyne, J. Porter, M.
WEST LIBERTY, IA.	Evans, P. R. Harrison, E. E. Walker & Co.
WESTON, IA.	Dillin, C. D. Farmers' Co-Operation Ass'n. Lee, J. C.
WILTON, IA.	(P. O. Wilton Junction, Ia.) Johnson Bros.
WINTERSET, IA.	Dow & Sandham Mickelwait & Young
WIOTA, IA.	Coats & Hatton Counselman, C. & co. McWaid, J. A. Young, R. T.
KANSAS	
MEADE, KAN.	Ferguson & Martin Graves, J. R. Hassett, Jno. & Co. Twist, E. A. Williams, E. W.
MEDORA, KAN.	McEiroy, J. C. Poulton, Wm.
MINEOLA, KAN.	(Clark Co.) Easton & Williams
MONTROSE, KAN.	(Jewell Co.) Jacobson, J. Reynolds, L. D.
MORGANVILLE, KAN.	Davis, A. C. & Co. Dugger & Thompson Morganville R. Mills Silver, Wm.
MULLINVILLE, KAN.	Edwards & Noble

CITY, STATE	DEALER/SHIPPER
KANSAS (cont.)	
MUNDEN, KAN.	Davis, A. C. & Co. Hunter Bros. & Co. Wear Com. Co.
NARKA, KAN.	Davis, A. C. & Co. Kramel, Frank
NEW CAMBRIA, KAN.	Donmeyer, S. P. Kansas Grain & L. S. Co.
NO. TOPEKA, KAN.	Billard, J. B. Central El. Co. Forbes Bros. Gregg, Hanson Judd, W. D. Page, Norton & Co. Davis, A. C. & Co. Woodman, H. & Co. (Jewell Co.) Davis, R. A. L. & Co. Kansas Grain & L. S. Co. Partridge, Fair, Shoak & Co. Shirtcliff, E. T. Anderson & Co. Guth & Strowig Drewer, J. H. C. Sterling, W. A. (Dickinson Co.) Ellison, E. T. Pearl El. Co. Anderson, A. E. Baker, W. L. Davis, A. C. & Co. Roll, W. H. Crays, G. W. Folks, W. K. Kansas Grain & L. S. Co. Beckley, M. Davis, A. C. & Co. <b>Holcomb, S. A.</b> Bowmon, G. W. Jones, A. F. Miller, F. P. Sanders & Smith Davis, A. C. & Co. Fletcher, J. T. Hall, B. W. (Doniphan Co.) Gillispie, W. H. Kirby, Wm. Purcell, Jno. Parker, H. Shirk, J. B. Spaid, D. D. Chappell, R. C. Gann, G. I. & Co. Hanna, G. W. (Sumner Co.) Cornwell, E. E. Dean, G. B. Errington, F. E. Macey, H. Macey, T. Cummings, J. P. Davis, A. C. & Co. Gregg Bros. Grain Co. Lohr & Weil Price, J. E.
NORTON, KAN.	
OTEGO, KAN.	
PAXICO, KAN.	
PEABODY, KAN.	
PEARL, KAN.	
PECK, KAN.	
PERTH, KAN.	
PHILLIPSBURG, KAN.	
PIERCE JUCT., KAN.	
<b>POWHATTAN, KAN.</b>	
PRAIRIE VIEW, KAN.	
PRATT, KAN.	
PRESTON, KAN.	
PURCELL, KAN.	
RAMONA, KAN.	
REXFORD, KAN.	
RILEY, KAN.	
RIVERDALE, KAN.	
RULETON, KAN.	
SABETHA, KAN.	

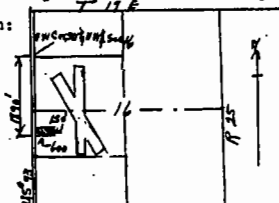
CITY, STATE	DEALER/SHIPPER
KANSAS (cont.)	
SALINA, KAN.	Miller, Taylor Salina M. & Elev. Co. Solomon, M. Western Star Mills Wickham & Co.
SELDEN, KAN.	Brewer, L. W. Chandler, Chas.
SMITH CENTER, KAN.	Davis, A. C. & Co. Relihan, D.
SOLOMON, KAN.	Collins & Dewar Davis, A. C. & Co. Kansas Grain & L. S. Co. Nickerson, B. F. & Co.
STRAIGHT CREEK, KAN.	Davis, A. C. & Co.
STUTT GART, KAN.	Nash, Geo.
TAMPA, KAN.	Parker, H. Priesen, A. B.
TOPEKA, KAN.	Capitol El. Co. Davis, A. C. & Co.
TROY, KAN.	Leland, C., Jr. Zimmerman, W. F.
TURON, KAN.	Frazer, Mark Kansas Grain & L. S. Co.
VALENCIA, KAN.	Fassebaum, J. P.
WABAUNSEE, KAN.	Fielding, Geo. T. Lingfelter, J. M. Mills, T. D.
WALDECK, KAN.	Hinkson, A.
WELLINGTON, KAN.	Ætna Mills Davis, A. C. & Co. Folks, W. K. Hunter Milling Co.
WELLSFORD, KAN.	Horton, B. G. Parker, H.
WEST PLAINS, KAN.	Campbell, E. M. Mears, E. M.
WHITE CITY, KAN.	Jenkins Bros. Parmer, R. M.
WHITEWATER, KAN.	Burns, E. T. Sterling, W. A. & Son
WHITING, KAN.	Hodge & Brown Shedd & Marshall
WICHITA, KAN.	Billingsly & Grant Haen, J. W. & Co. Wilson, J. J. & Co.
WILLARD, KAN.	Cope, T. H.
WOODBINE, KAN.	Smith Bros.
ZEANDALE, KAN.	Farl, Geo. W. Farmers' Alliance Fielding, G. T. Lind, L. Mills, T. D. Wamego Mill & El. Co.
ZYBA, KAN.	Warrel, A. Brown, R. B. Walters, H. C.

CITY, STATE	DEALER/SHIPPER
MISSOURI	
MERCER, MO.	Alley & Jones
PLATTE CITY, MO.	Beall, B. R. Phoenix Mill & El. Co.
PLATTSBURGH, MO.	Gill & Funkhouser
PRINCETON, MO.	Bowshen, J. R.
RUSHVILLE, MO.	Tenton, J. B.
SPICKARDS, MO.	(P. O. Spickardsville, Mo.) Baker & McVay Brewer, W. H. Houseman, W. H.
TRENTON, MO.	Saller, G. A.
WALLACE, MO.	Crenshaw, G. F.
WEATHERBY, MO.	
NEBRASKA	
NELSON, NEB.	Beatrice Flax & Seed Co. Davis, A. C. & Co. Diehl & Herrick
NORA, NEB.	Nye, Schneider & Co.
PAWNEE, NEB.	(P. O. Pawnee City, Neb.) Cooper, O. A. Johnston & Law Schench, O. H. (P. O. Hamilton, Neb.) Brewster & Williss
ROCKFORD, NEB.	Davis, A. C. & Co.
RUSKIN, NEB.	Gund, Henry Walsh & Steinauer
STEINAUER, NEB.	(P. O. Reynolds, Neb.) Hool, Geo. W.
THOMPSON, NEB.	Lindell & Cailey Allen, J. V. & Son
VIRGINIA, NEB.	Davis, A. C. & Co. Weir Com. Co.

<sup>a</sup> Information from Mardos, 2006, *1891 Grain Dealers and Shippers Gazetteer*, Mardos Memorial Library of On-Line Books and Maps, Transportation Selections, Index for Chicago, Rock Island, and Pacific Railway Part 2, [www.memoriallibrary.com/Trans/RRGaz/CKN/data2.htm](http://www.memoriallibrary.com/Trans/RRGaz/CKN/data2.htm), accessed October 18.

along the East right-of-way  
line of United States Highway No. 73, to the point  
of beginning, said tract containing 2.066 acres,  
more or less,

to permit the placing thereon of CCC owned granaries. This space is located as  
indicated herein:



It is understood that the Association is to store grain in said granaries and it is, therefore, hereby agreed that the Association shall have the right of ingress and egress at any time to the space herein leased. Said granaries shall not be considered as affixed to said real estate and the Association shall have the right to remove any or all of said granaries at any time.

Provided, however, the Lessor hereby reserves unto itself, and/or its lessee the right to operate, maintain and renew such pipe lines, electric transmission lines, telephone lines, telegraph lines, signal lines and other facilities of like character as may exist upon, under or over the leased premises as of the date of this lease, it being agreed that this lease is subject and subordinate to any and all rights granted by the lessor for any such existing lines and facilities.

It is further agreed that upon the expiration of this lease, or in case the Association shall in any manner fail to comply with the terms and conditions hereof, the Association shall, forthwith, cease to use or remain upon said premises and shall remove all the improvements placed thereon by the Association and restore said premises to substantially their former state.

If the Association fails to surrender to the lessor the leased premises upon any termination or expiration of this lease, all the liabilities and obligations of the Association hereunder shall continue in effect until the leased premises are surrendered; and no termination or expiration hereof shall release the Association from any liability or obligation hereunder which theretofore or thereafter may accrue.

It is further agreed that this lease shall be binding upon the Association and assigns of the Association, and shall inure to the benefit of the lessor, its successors and assigns.

No Member of or Delegate to Congress or Resident Commissioner shall be admitted to any share or part of this agreement or to any benefit to arise therefrom. Nothing, however, herein contained shall be construed to extend to any incorporated company, if the agreement be for the general benefit of such corporation or company.

IN TESTIMONY WHEREOF, the parties have executed this instrument in duplicate the day and year first above written.

Roy V. Nelson  
Witness

Roy V. Nelson  
Witness

CITY OF HIAWATHA  
(Lessor)  
BY R.T. NICHOLS  
(Mayor)  
BROWN COUNTY AGRICULTURAL  
CONSERVATION ASSOCIATION  
By: A.S. Kern  
County Committee.

Chicago, Rock Island and  
Pacific Rail Road Co.

to

Brown County Agricultural  
Conservation Assn.

Filed for record January 7, 1950  
at 8:30 o'clock A.M.

Irene V. Dawson  
Register of Dawson

LEASE  
-B-31982

(a) 26937-4

THIS INDENTURE, Made and entered into this 15th day of September, nineteen hundred forty-nine, by and between the CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY, hereinafter called the "Lessor," and the Brown County Agricultural Conservation Association, of Powhattan, <sup>Kansas</sup> hereinafter called the "Lessee."

## WITNESSETH:

The Lessor does hereby lease, demise and let unto the Lessee the following parcel of land at the station of Powhattan County of Brown, State of Kansas, and described as follows, to-wit:

Beginning at a point of intersection at the south line of Main Street, in the Town of Powhattan, with the westerly right of way line of Chicago, Rock Island and Pacific Railroad Company; thence southerly along said right of way line nine hundred fifty (950) feet; thence easterly paralleling the south line of Main Street one hundred thirty-eight (138) feet to a point twenty-five (25) feet westerly from center line of said Railroad Company's main track; thence northerly parallel with and twenty-five (25) feet westerly from center line of said main line tract nine hundred fifty (950) feet to southerly line of said Main Street; thence westerly along said street line one hundred thirty-eight (138) feet, to the point of beginning, as shown in yellow on the blueprint attached hereto and made a part hereof.

This lease cancels and supersedes Lease B-26876

TO HOLD for the term of One (1) year and thereafter until thirty days after either party shall have given the other written notice of its desire to terminate this Indenture; but subject always to the following express conditions, viz:

1. That the Lessee shall pay as rent for said demised premises the sum of Seventy-three and 00/100 Dollars per annum, payable annually at the expiration of each year or proportionately at the expiration of this lease.
2. That the Lessee shall use said premises as a site for bins for storage of grain and for no other purpose whatsoever, unless the Lessor shall consent in writing to a change of use; and that the Lessee will not assign this lease or underlet said premises or any part thereof without the written consent of the Lessor and in no event unless assignee or Sub-Lessee shall agree to be bound by all the terms and conditions of this lease;
3. That the Lessee shall, at its expense, construct, maintain, operate, and, at the termination of this lease, remove said bins and contents and restore the premises to the same condition as when entered upon, ordinary wear and tear, and damage by the elements excepted. Necessary means of egress and ingress shall be afforded the Lessee at its expense;

The Lessee shall anchor all portable-type grain bins to the ground in such manner as will insure each bin remaining in its original location.

4. That it is specifically understood that without considering any other provision of this lease, damage to, or loss of, grain or bins shall be borne solely by the Lessee and in no event by the Lessor.

That it is understood that the movement of railroad locomotives involves some risks of fire, and the Lessee assumes all liability for and agrees to indemnify the Lessor against loss or damage to property of the Lessee, or to property placed upon the Lessee's premises, regardless of railroad negligence, arising from fire caused by locomotives operated by the Lessor in the vicinity of said demised premises, except to the premises of the Lessor, and to rolling stock belonging to the Lessor or to others, and to shipments in the course of transportation;

That the Lessee hereby releases the Lessor from and agrees to indemnify the Lessor against all loss, damage or injury, caused by or resulting from any act or omission of the Lessee, its employees or agents, to the person or property of the parties hereto and their employees and to the person or property of the parties here-

to and their employees and to the person or property of any other person or corporation, while on or about said demised premises, and if any claim or liability other than from fire shall arise from the joint or concurring negligence of both parties hereto, it shall be borne by them equally.

That in any case where the releases or assumptions of liability hereinabove written shall be held not to be valid in law, the Lessor shall have the full benefit of any insurance effected by the Lessee;

5. This lease shall inure to the benefit of, and be binding upon, the parties hereto and upon the successors and assigns of the Lessor, and it shall be binding upon the Lessee, its Sub-Lessees and assigns, only to the extent that they may legally assent to the provisions herein and in no event shall any of the obligations of this agreement be binding individually upon any person by reason of his membership in the Lessee association or committee thereof.

6. The Lessor hereby reserves unto itself, and its licensees, the right to operate, maintain and renew such pipe lines, electric transmission lines, telephone lines, telegraph lines, signal lines and other facilities of like character as may now or hereafter exist or be placed upon, under or over the premises, it being agreed that this lease is subject and subordinate to any and all such rights and uses.

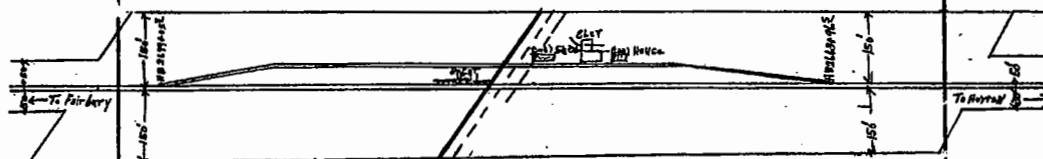
IN WITNESS WHEREOF, the parties hereto have caused these presents to be duly executed the day and year first above written.

CHICAGO, ROCK ISLAND AND PACIFIC  
RAILROAD COMPANY,

By J.E. Angell  
Real Estate and Tax Commissioner.

Brown County Agricultural Conservation  
Association  
By A.S. Kern  
Chairman.

ATTEST:  
Bernice H. Welsh  
Secretary.





1954 Aerial





1959 Aerial





1966 Aerial



## MISCELLANEOUS RECORD No. 270

the grantee, her successors and assigns, an easement, in, over, and upon the following described land situated in the County of Brown, State of Kansas, to-wit:

The East half (E 1/2) of Lots one (1), two (2) and three (3) in Block 26, in Fairview City, Kansas

Said easement shall cover a strip of land ten (10) feet wide and shall run where the water line is laid from the Grace Cox property described as Lot twelve (12), Block twenty-five (25), in Fairview City, Kansas, to the water well on the above described property. This easement is given to Grace Cox for the purpose of laying, relaying, maintaining and repairing a water line which is to be placed in this easement and said easement will be where said water line is run. This easement is for the water line only and no other utility without further consent of the grantor herein.

This easement includes the right of egress and ingress at any time over and upon the above described land of the grantor.

There is reserved to the grantor, its successors and assigns, the right and privilege to use the above described land of the grantor at any time, in any manner and for any purpose not inconsistent with the full use and enjoyment of the grantee, her successors and assigns, and of the rights and privileges herein granted.

Said grantor further gives permission for the grantee to hook to the water well located upon the property described above which is owned by the grantor. For which privilege the grantee is to pay \$2.00 a month rent for the use of the water from said well.

To have and to hold before said easement in over and upon the above described land of the grantor, with all rights and privileges and appurtenances thereto belonging, or anywise there pertaining, unto the grantee, her successors and assigns forever.

IN WITNESS WHEREOF, the grantor has executed this instrument on the 2nd day of June, 1969.

DELAWARE BAPTIST CHURCH  
/s/ By Cecil M. Reynolds  
President of the Board of Trustees

STATE OF KANSAS, COUNTY OF BROWN, as:

Before me, the undersigned, a Notary Public in aforesaid County and State, on this 2nd day of June, 1969, personally appeared Cecil M. Reynolds, to me known to be the identical person who executed the within and foregoing instrument and acknowledged to me that he executed the same as the act of the Delaware Baptist Church, and that he is President of Board of Trustees officer of said Church and has been authorized by said church governing body to execute the foregoing easement.

IN WITNESS WHEREOF, I have hereunto set my hand and official seal the day and year last herein above written.

My Commission Expires: April 13, 1971.  
(N.P. Seal)

/s/ Charles E. Jackson  
Notary Public.

Chicago, Rock Island and Pacific Railroad Co.

Filed for record June 18, 1969  
at 9:00 o'clock A.M.

Edith Moening  
Register of Deeds  
Alice Irving, Deputy

## CERTIFICATE OF ABANDONMENT

CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY, successor in interest to THE CHICAGO, ROCK ISLAND AND PACIFIC RAILWAY COMPANY and the CHICAGO, KANSAS & NEBRASKA RAILWAY COMPANY, hereby certifies that on the 6th day of January, 1967, the Interstate Commerce Commission, in an abandonment proceeding then pending before it, entered an order certifying that the present and future public convenience and necessity permit the abandonment of the line of railroad in Brown and Nemaha Counties, Kansas and Richardson, Pawnee and Gage Counties, Nebraska, extending from a point at or near Horton, Kansas to Beatrice, Nebraska; that pursuant to said order and certificate, the said line and the operation thereof were abandoned; that the following described premises have been and stand abandoned as a railroad right of way, to-wit:

All of the land which constituted right of way of the Chicago, Rock Island and Pacific Railroad Company on, over and across the following described property in Brown and Nemaha Counties, Kansas, to-wit:

BROWN COUNTY, KANSAS  
North Half of the Northeast Quarter of Section 31, Township 4 South, Range 17 East;  
South Half of Section 30, Township 4 South, Range 17 East;  
Section 25, Township 4 South, Range 16 East;  
Southwest Quarter of the Southwest Quarter of Section 24,

## MISCELLANEOUS RECORD No. 270

Township 4 South, Range 16 East; Section 23, Township 4 South, Range 16 East;  
 Southwest Quarter of Section 14, Township 4 South, Range 16 East;  
 North Half of the North Half of the Northeast Quarter of Section 15, Township 4 South, Range 16 East; Section 10, Township 4 South, Range 16 East;  
 West Half of Section 3, Township 4 South, Range 16 East;  
 Southwest Quarter of the Southwest Quarter of Section 34, Township 3 South, Range 16 East;  
 East Half of Section 33, Township 3 South, Range 16 East;  
 Southwest Quarter of the Southeast Quarter of Section 28, Township 3 South, Range 16 East;  
 North Half of the Northwest Quarter of Section 28, Township 3 South, Range 16 East;  
 Southwest Quarter of Section 21, Township 3 South, Range 16 East;  
 East Half of Section 20, Township 3 South, Range 16 East;  
 South Half of Section 17, Township 3 South, Range 16 East;  
 Section 18, Township 3 South, Range 16 East;  
 Section 13, Township 3 South, Range 15 East;  
 Southwest Quarter of Section 12, Township 3 South, Range 15 East;  
 East Half of Section 11, Township 3 South, Range 15 East;  
 Section 2, Township 3 South, Range 15 East;  
 Southwest Quarter of the Southwest Quarter of Section 35, Township 2 South, Range 15 East;  
 Southeast Quarter of Section 34, Township 2 South, Range 15 East;  
 Section 28, Township 2 South, Range 15 East;  
 Northeast Quarter of Section 29, Township 2 South, Range 15 East;  
 Section 20, Township 2 South, Range 15 East;  
 Northeast Quarter of Section 19, Township 2 South, Range 15 East;  
 Section 18, Township 2 South, Range 15 East; and  
 Southwest Quarter of Section 7, Township 2 South, Range 15 East.

## Nemaha County, Kansas

East Half of Section 12, Township 2 South, Range 14 East;  
 West Half of the Southwest Quarter of the Southeast Quarter of Section 2, Township 2 South, Range 14 East;  
 West Half of Section 2, Township 2 South, Range 14 East;  
 Northeast Quarter of Section 3, Township 2 South, Range 14 East;  
 Section 34, Township 1 South, Range 14 East;  
 Southwest Quarter of Section 27, Township 1 South, Range 14 East;  
 West Half of the Northeast Quarter of Section 28, Township 1 South, Range 14 East;  
 Northwest Quarter of Section 28, Township 1 South, Range 14 East;  
 Southwest Quarter of Section 21, Township 1 South, Range 14 East;  
 Northeast Quarter of Section 29, Township 1 South, Range 14 East;  
 South Half of Section 20, Township 1 South, Range 14 East;  
 Section 19, Township 1 South, Range 14 East;  
 Southwest Quarter of the Southwest Quarter of Section 18, Township 1 South, Range 14 East;  
 South Half of Section 13, Township 1 South, Range 13 East;  
 Southeast Quarter of Section 14, Township 1 South, Range 13 East;  
 North Half of Section 23, Township 1 South, Range 13 East;  
 North Half of Section 22, Township 1 South, Range 13 East;  
 Southwest Quarter of the Southwest Quarter of Section 15, Township 1 South, Range 13 East;  
 East Half of the West Half of the Southeast Quarter of Section 16, Township 1 South, Range 13 East;  
 East Half of the Southeast Quarter of Section 16, Township 1 South, Range 13 East;  
 Southeast Quarter of Section 17, Township 1 South, Range 13 East;  
 North Half of Section 17, Township 1 South, Range 13 East;  
 West Half of Section 8, Township 1 South, Range 13 East;  
 Southwest Quarter of Section 5, Township 1 South, Range 13 East; and  
 Section 6, Township 1 South, Range 13 East.

IN WITNESS WHEREOF, CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY has caused this instrument in writing to be signed on its behalf by its Manager-Real Estate, thereunto duly authorized so to do and be attested by its Assistant Secretary, and has caused its common seal to be hereunto affixed this 11th day of June, 1969.

ATTEST:

/s/ F.A. Kasiurak  
 Assistant Secretary  
 F.A. Kasiurak

(CORP. SEAL)

CHICAGO, ROCK ISLAND AND PACIFIC  
 RAILROAD COMPANY

/s/ By O.C. Thompson  
 Manager-Real Estate  
 O.C. Thompson

STATE OF ILLINOIS)

County of Cook ) ss

BE IT REMEMBERED, That on this 11th day of June, A.D., 1969, before me, the undersigned, a Notary Public in and for the County and State aforesaid, came O.C. THOMPSON, Manager-Real Estate of CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY, a corporation duly organized, incorporated and existing under and by virtue of the laws of Delaware and F.A. KASIURAK, Assistant Secretary of said corporation, who are personally known to me to be such officers, and who are personally known to me to be the same persons who executed, as such officers the within instrument of writing on behalf of said corporation, and such persons duly acknowledged the execution of the same to be the act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my notarial seal the day and year last above mentioned.

Term Expires: April 14, 1970  
 (N.P. Seal)

/s/ Donald L. Matteson  
 Notary Public  
 Donna L. Matteson

KANSAS QUITCLAIM DEED  
(Corporation to Corporation)

THIS INDENTURE, Made on the 25th day of February, A. D., One Thousand Nine Hundred and Seventy-Two, by and between CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY, a corporation duly organized, incorporated, and existing under and by virtue of the laws of the State of Delaware and having its principal place of business at Chicago in the State of Illinois, party of the first part, and

----- BROWN COUNTY COOPERATIVE ASSOCIATION -----

\_\_\_\_\_, a corporation duly organized, incorporated, and existing under and by virtue of the laws of the State of Kansas and having its principal place of business at Hiawatha in the State of Kansas, party of the second part:

WITNESSETH, THAT SAID PARTY OF THE FIRST PART, in consideration of the sum of TWO THOUSAND SEVEN HUNDRED TWENTY-FIVE AND 00/100 (\$2,725.00) DOLLARS - - - - - to it paid by said party of the second part (the receipt of which is hereby acknowledged), does by these presents Remise, Release and forever Quitclaim, subject to the reservations hereinafter designated, unto the said party of the second part the following described lots, tracts or parcels of land lying, being and situate in the Town of Powhattan, County of Brown and State of Kansas, to-wit:

A part of the Chicago, Rock Island and Pacific Railroad Company's depot grounds in the Town of Powhattan, located in the West Half of Section 28, Township 3 South, Range 16 East, Brown County, Kansas, Described as follows:

Commencing at the center of said Section 28; thence south along the centerline of said Section 28 a distance of 1800 feet, more or less, to a point on the original centerline of the Chicago, Rock Island and Pacific Railroad Company's main track; thence North 26° West a distance of 1409.5 feet; thence North 64° East a distance of 150 feet to a point on the east line of said depot grounds being the point of beginning; thence North 26° West 1110 feet; thence South 64° West 200 feet; thence South 26° East 1110 feet; thence North 64° East 200 feet to the point of beginning.

State of Kansas, Brown County, SS.  
Filed for record at 2:45 o'clock P. M.  
and recorded in book 280 page 118

MAR 10 1972

Sandra Manning  
REGISTER OF DEEDS

By \_\_\_\_\_ Deputy

Entered in Transient Record in my

book 10 day of March

A. D., 1972 Fee \$ \_\_\_\_\_

Darlene Meyer

County Clerk in

Party of the first part reserves an easement for the continued maintenance, operation and use of all existing \_\_\_\_\_, conduits, sewers, water mains, gas lines, electric power lines, communication lines, wires and other utilities and easements of any kind whatsoever on said premises, whether owned, operated, used or maintained by the party of the first part, party of the first part's licensees or others, and whether or not of record, with reasonable right of entry for the purpose of repairing, reconstructing and replacing same; and

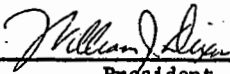
Reserves unto itself, its successors and assigns, all coal, oil, gas, casinghead gas and all ores and minerals of every kind and nature underlying the surface of said premises, together with the full right, privilege and license at any and all times to explore, or drill for and to protect, conserve, mine, take, remove and market any and all such products in any manner which will not damage structures on the surface of said premises.

TO HAVE AND TO HOLD THE SAME, with all the rights, immunities, privileges and appurtenances thereto belonging, unto said party of the second part and unto its successors and assigns forever, so that neither the said party of the first part, nor its successors or assigns, nor any other person or persons for it or in its name or behalf, shall or will hereafter claim or demand any right or title to the aforesaid premises or any part thereof, but they and each of them shall, by these presents, be excluded and forever barred.

IN WITNESS WHEREOF, The said party of the first part has hereunto caused this Deed to be signed on its behalf by its \_\_\_\_ President, thereunto duly authorized so to do, and to be attested by its \_\_\_\_ Secretary, and has caused its common seal to be hereunto affixed, the day and year first above written.

CHICAGO, ROCK ISLAND AND PACIFIC  
RAILROAD COMPANY

By

  
\_\_\_\_\_  
President  
William J. Dixon

ATTEST:



STATE OF ILLINOIS )  
 ) SS  
COUNTY OF COOK )

BE IT REMEMBERED, That on this 25th day of February, A. D., 1972,  
before me, the undersigned, a Notary Public in and for the County and State aforesaid,  
came William J. Dixon, -- President of CHICAGO, ROCK ISLAND AND  
PACIFIC RAILROAD COMPANY a corporation duly organized, incorporated and existing under  
and by virtue of the laws of Delaware and E. F. Wilkinson, --  
Secretary of said corporation, who are personally known to me to be such officers, and  
who are personally known to me to be the same persons who executed, as such officers,  
the within instrument of writing on behalf of said corporation, and such persons duly  
acknowledged the execution of the same to be the act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my notarial  
seal the day and year last above mentioned.



Donna L. Matteson  
Notary Public  
Donna L. Matteson



REAL ESTATE MORTGAGE  
and  
CHATTEL SECURITY AGREEMENT  
(With Future Advance Clause)

THIS SECURITY INSTRUMENT dated this 21st day of April, 1972, between The Brown County Cooperative Association, a cooperative corporation organized and existing under the laws of the State of Kansas, whose mailing address is Zip Code 66434 in Hawatha County of Brown State of Kansas, hereinafter called the Borrower, and the Wichita Bank for Cooperatives, a corporation organized and existing under the Farm Credit Act of 1933, as amended, whose mailing address is 315 Central Building, in the City of Wichita, State of Kansas, hereinafter called the Bank.

WHEREAS, the Borrower has given the following described promissory notes to the Bank as evidence of actual loans made or to be made to the Borrower by the Bank, each note bearing interest at the rate provided therein, such interest being payable quarterly on the first day of March, June, September, and December of each year until the loan is paid in full.

Date of Note	Amount	Final Due Date
August 18, 1971	\$500,000	Payable on Demand

NOW, THEREFORE, in order to secure the payment of said notes, all sums advanced thereon and all sums repaid and then re-advanced thereon whether required or discretionary, together with all interest and all additional sums advanced to the Borrower or its successors by the Bank, such additional sums being limited insofar as the balance outstanding at any one time is concerned to \$500,000 as to any real property described hereafter, but being unlimited insofar as chattel property described hereafter is concerned, such additional sums being evidenced by the Borrower's notes and bearing interest as provided in said notes, and to secure the performance and observance of covenants and conditions herein contained, the Borrower hereby mortgages all of the following real property and gives a security interest in all of the following chattel property and the proceeds and products thereof, to the Bank, said property being described as follows, and located in the County of Brown State of Kansas, to-wit:

**POWATTAN:**

A part of the Chicago, Rock Island and Pacific Railroad Company's depot grounds in the Town of Powhattan, located in the West Half of Section 28, Township 3 South, Range 15 East, Brown County, Kansas, described as follows:

Commencing at the center of said Section 28; thence South along the centerline of said Section 28 a distance of 1800 feet, more or less, to a point on the original centerline of the Chicago, Rock Island and Pacific Railroad Company's main track; thence North 26° West a distance of 1049.5 feet; thence North 64° East a distance of 150 feet to a point on the East line of said depot grounds being the point of beginning; thence North 26° West 1110 feet; thence South 64° West 200 feet; thence South 26° East 1110 feet; thence North 64° East 200 feet to the point of beginning.

Together with all fixtures and equipment presently or hereafter used in connection therewith including but not limited to the following items:

- (1) Feed Mill Equipment: One 3,000 gal. molasses tank; one 500 gal. molasses tank; one 2" molasses pump; one 5-H.P. 1200 RPM Fairbanks-Morse totally enclosed fan cooled motor with base and starter; one Wenger sweet feed mixer with molasses tank and 15-H.P. Baldor Motor; one 30' wooden elevator leg complete; one 5-H.P. 1765 RPM Fairbanks-Morse totally enclosed fan cooled motor with base and starter; one 1-Ton Universal vertical feed mixer with mixer and controls; one 1-Ton Brower vertical feed mixer with motor and controls; one 8" x 26" vertical screw lift; one 5-H.P. 1765 RPM Fairbanks-Morse totally enclosed fan cooled motor with base and starter; one 16" Roskamp all steel roller mill; one 10-H.P. 1745 RPM Fairbanks-Morse motor with base and starter; one 14" Jacobson hammer mill with fan, pipe, collector and magnet; one 30-H.P. 1800 RPM open G. E. motor with base and starter; one 8" x 4' inclined screw lift; One 1-H.P. 1760 RPM Baldor totally enclosed fan cooled motor with base and starter; one 8" x 18" inclined screw lift; one double beam all steel platform scale.
- (2) Elevator Equipment: One 60' wooden elevator leg complete; one 7-1/2-H.P. 1765 RPM Fairbanks-Morse totally enclosed fan cooled motor on Falk Motor reducer; two 3-H.P. 1765 RPM Fairbanks-Morse totally enclosed fan cooled motors mounted on Falk motor reducers; two 12" x 38' screw conveyors in wood boxes; one 10 bu. Richardson shipping scale; one lot spouting equipment; one 5' x 5' pipe grain grate; one Kewanee Hydraulic trucklift, overhead type; one air compressor unit with motor; one wooden manlift; one Union Iron Works Great Western combination corn sheller and cleaner with all steel drag feeder; one 30-H.P. 1760 RPM

Partial Release Book 320-Page 162

Fairbanks-Morse open motor with base and starter; one 26' cc. wooden elevator leg; one 8' x 30' wood frame, inclined belt cob elevator; one 2-H.P. 1800 RPM open G. E. motor with base and starter; one Fairbanks-Morse all steel platform scale; one Eureka seed cleaner with two 24' seed legs; one 5-H.P. 1745 RPM Fairbanks-Morse totally enclosed fan cooled motor with base and starter; one Celkins dust type seed treater complete; one Bodine electric bag closer; one Big Chief 12" corn cutter & grader; one 5-H.P. 1725 RPM Baldor motor with base and starter; one 500 bu. Tux-o-Wink batch grain dryer complete; one 9" x 40' screw conveyor complete; one 7-1/2-H.P. motor 1800 RPM totally enclosed fan cooled; one 7-1/2 H.P. speed reducer.

- (3) Equipment in Quonset: One 9" x 210' screw conveyor; one 15-H.P. 1725 RPM totally enclosed fan cooled motor with base and starter; one #15 Dodge speed reducer.
- (4) Office Equipment: One 50,000# Fairbanks-Morse Dial Beam Scale with 10' x 35' concrete deck; one Steinlite moisture tester.
- (5) Elevator Equipment: One 6,500 bu. elevator leg complete; one 40-H.P. motor 1800 RPM totally enclosed fan cooled; one 40-H.P. head drive; one lot spouting; one 25 bu. Richardson shipping scale complete with hoppers; one Shelby 2-H.P. electric manlift; one 48" dust collector with spout; one #30 exhaust fan with 5-H.P. motor; one 7-1/2-H.P. overhead trucklift; one 7' x 9' steel grain grate; one 14' x 9' steel grain grate.
- (6) Office Equipment: One 50-Ton Fairbanks-Morse Truck Scale with Dial Head, Print-O-Matic and 70' concrete deck; one moisture tester.
- (7) Equipment in Grain Tanks: One lot of aeration ducting; one temperature scanning system.
- (8) Bulk Fertilizer Plant: One 1-Ton hopper scale complete; one screw type blender complete with motor and drive; one bucket type elevator complete with motor and drive; one screw conveyor complete with motor and drive.

#### HIAWATHA:

##### TRACT I:

All structures, improvements and additions located on that portion of the St. Joseph and Grand Island right-of-way leased to Union Pacific Railroad Company at Hiawatha, Kansas; described as follows:

Beginning at a point on the northerly line of Oregon Street, said point being 10 feet distant northeasterly from, normal to, centerline of Carrier's track No. 3, measure thence northwestwardly parallel to centerline of Carrier's said track No. 3, 155 feet, more or less, to the northerly line of alley; thence eastwardly along said northerly line of alley 132 feet, more or less, to the westerly line of Ninth Street; thence southwardly along said westerly line of Ninth Street 140 feet to the said northerly line of Oregon Street; thence westwardly along the said northerly line of Oregon Street 65 feet, more or less, to the point of beginning, containing 13,790 square feet, more or less;

Together with all fixtures and equipment presently or hereafter used in connection therewith including but not limited to one 60' x 102' steel frame and sheet metal office and warehouse, with one Hastings suspended gas furnace; one Century 150,000 BTU Forced Air Furnace; one double post hydraulic truck lift; one 2-H.P. Brunner vertical air compressor complete with tank and motor; one 40 gal. Mor-Flo hot water heater; one single computer gasoline pump complete; one double computer gasoline pump complete; one 5,000 gal. underground storage tank; two 2,000 gal. underground storage tanks.

##### TRACT II:

Beginning at a point 549.14 feet south of the northwest corner of the southwest quarter of Section 29, Township 2 south, Range 17 east of the 6th P.M.; thence easterly at an angle to the west line of said Section 29 of 89°54' measured from north to east, a

distance of 906.10 feet; thence southerly at an angle of  $89^{\circ}54'$  measured from west to south, a distance of 194.91 feet; thence westerly at an angle of  $92^{\circ}28'$  measured from north to west, a distance of 906.93 feet to a point on the west line of Section 29, said point being 780.89 feet south of the northwest corner of the southwest quarter of said 29; thence northerly along said west section line at an angle of  $87^{\circ}32'$  measured from east to north a distance of 231.75 feet to point of beginning, said tract containing 4.44 acres, more or less, with access to the south right-of-way from east to west, to the above described real estate, Brown County, Kansas, Less: A tract of land previously deeded to the Union Pacific Railroad Company as shown by deed dated February 24, 1969, and recorded April 16, 1969, in Book 270 at Page 425 in the office of the Registrar of Deeds, Brown County, Kansas.

Together with all fixtures and equipment presently or hereafter used in connection therewith, including but not limited to the following bulk fertilizer handling equipment:

One fertilizer blender complete with drive and motor; one Hopper scale complete with dial head; one 12" x 34' screw conveyor complete with drive and motor; one 9" x 14' screw conveyor complete with drive and motor; one 60-Ton per hour elevator leg complete with drive and motor; one 90-Ton per hour elevator leg complete with drive and motor; all spouting, including gates and distributors.

### TRACT III:

Commencing at a point 33.612 rods south and 25 feet east of the corner stone located at the northwest corner of the southwest quarter of Section 29, Township 2 South, Range 17 East of the 6th P.M.; thence south 33.025 rods to a point; thence east 19.38 rods; thence north 33.025 rods to a point; thence west 19.38 rods to place of beginning. Also, a tract of land in the southwest quarter of Section 29, Township 2 South, Range 17 East of the 6th P.M., commencing at the southeast corner of land described in a deed of record at Page 303 of Volume 91, recorded in Brown County, Kansas; thence south 33.64 rods; thence west 33.76 rods; thence north 33.64 rods; thence east 33.76 rods to place of beginning, Brown County, Kansas, Less: A tract deeded to the Union Pacific Railroad Company, as shown by deed dated February 24, 1969, and recorded April 16, 1969, in Book 270, at Page 425 in the Office of the Registrar of Deeds, Brown County, Kansas.

Together with all fixtures and equipment presently or hereafter used in connection therewith, including but not limited to the following items:

- (1) One 50-Ton truck scale complete with dial head, printer and 12' x 70' concrete deck.
- (2) One 6,000# Hopper scale complete with dial head and hoppers; two 8" x 14' grain augers with drives and 3-H.P. motors; one 38' bin auger with drive and 7-1/2-H.P. motor; two 32' bin augers with drives and 7-1/2-H.P. motors; one truck side receiving hopper complete with 8" x 47' screw conveyor and 7-1/2-H.P. motor; one 16" x 12' slider belt conveyor complete with 3/4-H.P. motor; one 12" x 16' screw feeder complete with drive and 5-H.P. motor; one Bender truck hoist complete with cradle and 7-1/2-H.P. motor; one 6,000 gal. underground molasses tank with filler and vent pipes; one 25 gallon molasses pre-heater complete with thermostat; one two inch molasses pump with 3-H.P. motor, valves, strainer and pipe; one 3-Ton B/J horizontal mixer with drive and 20-H.P. motor; one 10" x 36" Ross 2 pair high roller mill with drive and 30-H.P. motor; two 2,800 bph steel elevator legs 86' high complete with drives and 10-H.P. motors; one 2,800 bph steel elevator leg 74' high complete with drive and 7-1/2-H.P. motor.
- (3) Two 7,000 bph elevator legs complete with cups, belting, heads, boots, drives and motors; all elevator spouting, including gates, distributors, spouts, car spout, and draw-offs; one electric manlift; one 10-H.P. overhead trucklift complete; one 25-bu. shipping scale complete; one 4,000 bph Clay cleaner complete with screens and motor; one temperature control system with cables in 10 tanks; 8 15-H.P. aeration fans with motors and ducting.

### REGISTRATION FEE

Amount of Indebtedness \$585,000 Fee \$125.00

Filed this 26 day of May, 1972 at 7:00

Register of Deeds, Brown County, Kansas

State of Kansas, Brown County, SS.  
Filed by record at 1:45 o'clock PM  
and recorded in book 279 page 273

MAY 26 1972

Register of Deeds  
By \_\_\_\_\_ Deputy

**TRACT IV:**

Beginning at a point 20 rods south of the intersection of the east line of Tenth Street, and the south line of Iowa Street in the City of Hiawatha, Kansas; thence east 7.45 chains; thence south 3.70 chains to the line of the north leg of Wye of the St. Joseph and Grand Island Railroad; thence northeast along said Wye, 5.50 chains; thence east .49 chains to the intersection of the right-of-way of the St. Joseph and Grand Island Railroad; thence southeast along said right-of-way 14.40 chains to the intersection of the right-of-way of the Missouri Pacific Railroad; thence southwesterly along said right-of-way 6.36 chains; thence west 9.10 chains; thence south .92 chains; thence west 4.01 chains; thence north 21.52 chains to place of beginning, containing 28 acres, more or less, except a tract of land 3.6 acres deeded to the St. Joseph and Grand Island Railroad, and except a tract of land 13.24 acres deeded to Robert K. Brook; all in southwest quarter of Section 29, Township 2 south, Range 17 east of the 6th P.M., and containing 8.86 acres, more or less.

Together with all fixtures and equipment presently or hereafter used in connection therewith, including but not limited to the following items:

- (1) One 18,000 gal.  $\text{NH}_3$  storage tank on concrete piers; one  $\text{NH}_3$  compressor complete with 5-H.P. motor; all plumbing and fabrication materials.
- (2) One 17,000 gal. vertical fuel storage tank on rock base; two 15,000 gal. vertical fuel storage tanks on rock base; two 8,800 gal. vertical fuel storage tanks on rock base; one 5,500 gal. vertical fuel storage tank on rock base; two Corken transfer pumps with 2-H.P. motors, plumbing, filters and accessory equipment.
- (3) One 30,000 gal. L.P. storage tank on concrete piers; one 26,000 gal. L.P. storage tank on concrete piers; one Corken L.P. pump with 5-H.P. motor; one Corken L.P. compressor with 5-H.P. motor; all plumbing and fabrication material.

TO HAVE AND TO HOLD the above described real property and chattels unto the Bank, its successors and assigns, until all notes, advances, future advances and loans are paid in full, and this instrument is released and terminated by the Bank.

The Borrower covenants and agrees with the Bank as follows:

1. That the Borrower is the same party customarily referred to in a mortgage as the Mortgagor and in a security agreement as the Debtor; the Bank is the same party customarily referred to in a mortgage as the Mortgagee and in a security agreement as the Secured Party.

2. That the Borrower holds absolute title to the above described property free and clear of all liens, encumbrances, mortgages and security agreements other than such interests held by the Bank, and the Borrower will warrant and defend the property and interest of the Bank against the claims and demands of all persons.

3. That the statements contained in the Borrower's application or applications are true and that the proceeds of the loan or loans secured hereby will be used solely for the purposes set forth in the loan agreement between the Borrower and the Bank.

4. That the Borrower will not execute any mortgages, financing statements or security agreements covering the above described property, except in favor of the Bank.

5. That the Borrower will execute a financing statement and such further and additional documents or instruments as the Bank may require, and will see that such instruments are properly filed or recorded, and will allow the Bank to actually take possession of any collateral described above in order to perfect or protect its interests under this instrument, if the Bank may so request.

6. That the Borrower will pay when due all indebtedness secured hereby, including interest and future advances, together with all costs and expenses of collection, including reasonable attorney's fees, if any there shall be at any time.

7. That the Borrower will keep all property described herein in good repair during the continuance hereof and will not cause, suffer, or permit waste thereof.

8. That the Borrower will furnish, at its own expense, any abstracts of title, abstracts of chattel lien, title insurance, Torrens certificates or other evidence of title required by the Bank.

9. That the Borrower will pay when due all taxes, levies, assessments or claims which are or may become liens against the above described property. That the Borrower will keep the above described property insured in such manner as the Bank may require. That the Borrower will pay all rental or lease payments required for the location of the above property. In the event the Bank pays any rents, taxes, lease payments, levies, charges, insurance premiums or other charges affecting the said property, the same shall become a part of the debt secured hereby and shall be payable on demand with interest thereon at the rate of six per cent per year.

10. That nothing herein contained shall be construed to obligate the Bank to make any loan or advances to the Borrower, and that the sole purpose of this instrument is to provide security for presently existing indebtedness, and for loans and advances which may in the absolute discretion of the Bank be made hereafter.

11. That the Borrower will perform and observe all of the terms and conditions of all loan agreements entered into between the Borrower and the Bank.

12. That the Borrower will, at all times during the existence of any part of the debt herein secured, maintain its corporate existence and operate its business as a cooperative association as that term is defined by Agricultural Marketing Act of 1929, as amended.

13. That the Borrower will not voluntarily transfer, sell or convey, nor allow an involuntary transfer by way of attachment, levy, garnishment or other judicial process, of any of the property covered by this instrument without the express written consent of the Bank, or unless the typed portion of this instrument provides to the contrary for specific items of collateral.

14. That in any instance in which notice to the Borrower is required, such notice shall be deemed sufficient and commercially reasonable when mailed by first class mail to the Borrower at the address given in this instrument. All arrangements for forwarding such notices if necessary and all failures on the part of the postal authorities shall be the responsibility of the Borrower.

15. That the Bank may examine any of the above property at any reasonable time and may at the Borrower's expense, examine the books, records, and documents of the Borrower, or require the same to be examined by an auditor approved by the Bank.

16. That the Borrower will promptly adopt and in good faith carry out any reasonable recommendations made by the Bank as to the Borrower's business practices, procedures, or personnel.

17. That if default shall be made in the payment of any principal sum, or interest thereon, or future advances, or interest thereon, or any taxes, claims, or insurance premiums, when such same are due, or in case of the violation of any of the above covenants and conditions, or upon any change of ownership of any property described herein without the Bank's consent then the Bank may elect without notice that the whole of the sum hereby secured, together with interest thereon shall become immediately due and payable, and the Bank may enforce payment thereof and all sums expended under the terms of this mortgage by foreclosure or otherwise.

18. That if the entire balance secured hereby is declared immediately due and payable, the Bank may immediately have a receiver appointed to protect and operate the property covered by this instrument. Any funds derived by the receiver may in his absolute discretion be used to pay current or past due taxes, insurance premiums or lease payments and may also be used to paint, patch, clean up, repair or improve the property covered by this mortgage.

19. That in case of default as aforesaid, the Bank may proceed in any commercially reasonable manner and may have the real or personal property covered by this instrument sold in separate parcels or as one unit, at the Bank's sole option. The Bank may dispose of any of the personal property, credit the proceeds as the Bank may reasonably determine, and then foreclose the mortgage on the real property and remaining personal property.

20. That the Bank may require the Borrower to assemble the collateral in case of default as aforesaid, and make such collateral available to the Bank at a place to be designated by the Bank which is reasonably convenient to both parties.

21. That the Borrower hereby waives appraisal should the Bank elect to accept such waiver at the time any foreclosure action may be filed hereunder. In Kansas the Borrower, being a corporation, hereby wholly waives the period of redemption ordinarily allowed in case of mortgage foreclosure. In New Mexico the parties hereby agree that the period of redemption shall be shortened to one month. In Colorado the parties hereby agree that the land described above is not agricultural real estate as that term is used in the Colorado Statutes.

22. That in the event of foreclosure, the Bank will account for any surplus remaining after the payment of all principal, interest and other charges provided herein or by law, and the borrower will be liable for any deficiency regardless of the classification of the collateral covered herein.

23. That in case any of the collateral described herein is left or placed in the Bank's possession, the Borrower will retain the obligation to preserve or pursue all rights against prior parties and the Bank is not responsible therefor. The Bank may use or operate the collateral for the purpose of preserving it, or its value, or pursuant to court order, whenever the Bank has possession of the collateral. Such use may be in any manner considered to be proper or advantageous by the Bank, its agents, or representatives, at the time such collateral is put to use.

24. That no remedy herein conferred on the Bank is intended to be exclusive of any other remedy or remedies, and each remedy shall be cumulative and shall be in addition to every other remedy given hereunder, or now or hereafter existing at law, or in equity or by statute.

25. That the omission of the Bank to exercise any option hereunder, in case of any default by the Borrower, shall not preclude the Bank from the exercise thereof at any subsequent time, or for any subsequent default, and nothing but a written contract of the Bank shall be a waiver of any option.

26. That all of the covenants and agreements of the Borrower shall extend to and bind its successors and assigns and all rights and privileges of the Bank under this instrument shall inure to the benefit of its successors and assigns.

This instrument is executed by the Borrower pursuant to the resolution of its Board of Directors.

IN WITNESS WHEREOF, this instrument is executed by the proper officers and its corporate seal is affixed hereto.

THE BROWN COUNTY COOPERATIVE ASSOCIATION

By Paul Duesing  
President

### CORPORATE ACKNOWLEDGEMENT

STATE OF KANSAS COUNTY OF BROWN ss.

On this 22nd day of May, 1972, before me appeared Paul Duesing

to me personally known, who being by me duly sworn did say that he is the President of The Brown County

Cooperative Association and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and that he executed the same as his free and voluntary act and deed as the free and voluntary act and deed of said corporation for the uses and purposes therein set forth.

Notary Public and notarial seal the day and year in this certificate above written.

JUN 6 1972

Notary Public



1972 Aerial



KANSAS QUITCLAIM DEED  
(Corporation to Individual)

THIS INDENTURE, Made this 18th day of October, A. D., One Thousand  
Nine Hundred and Seventy-Four, by and between CHICAGO, ROCK ISLAND AND PACIFIC  
RAILROAD COMPANY, a corporation duly organized, incorporated, and existing under and  
by virtue of the laws of the State of Delaware and having its principal place of  
business at Chicago in the State of Illinois, party of the first part, and  
MARY CHADWELL -----  
----- of the County of Brown, State  
of Kansas, party of the second part:

WITNESSETH, THAT SAID PARTY OF THE FIRST PART, in consideration of the sum  
of NINE HUNDRED AND NO/100 (\$900.00) DOLLARS -----  
to it paid by said party of the second part (the receipt of which is hereby  
acknowledged), does by these presents Remise, Release and forever Quitclaim, subject  
to the reservations hereinafter designated, unto the said party of the second part  
the following described lots, tracts or parcels of land, lying, being and situate in  
the City of Powhattan, County of Brown and State of  
Kansas, to-wit:

A part of the Chicago, Rock Island and Pacific Railroad Company's  
depot grounds in the City of Powhattan, located in the Northwest  
Quarter of Section 28, Township 3 South, Range 16 East, Brown  
County, Kansas, described as follows:

Beginning at a point on the original centerline of the Chicago,  
Rock Island and Pacific Railroad Company's main track, North  
26° West, 2319.5 feet from the intersection of said original  
main track centerline with the east line of the Southwest Quarter  
of said Section 28; thence South 64° West, 150 feet to a point on  
the west line of said depot grounds; thence North 26° West along  
the west line of said depot grounds a distance of 575 feet, more  
or less, to the northwest corner of said depot grounds; thence easterly  
along the north line of said depot grounds and the easterly extension  
thereof a distance of 170 feet, more or less, to a point on the said  
original main track centerline; thence South 26° East, along the said  
original main track centerline a distance of 500 feet, more or less,  
to the point of beginning.

Entered in Book 13  
In my office this 18 day of October  
1974  
1974

State of Kansas, Brown County, SS.  
Filed for record at 2:02 o'clock P.M.  
and recorded in book 84 page 445

OCT 23 1974

Paul M. [Signature]  
REGISTER OF DEEDS

Party of the first part reserves an easement for the continued maintenance, operation and use of all existing \_\_\_\_\_, conduits, sewers, water mains, gas lines, electric power lines, communication lines, wires and other utilities and easements of any kind whatsoever on said premises, whether owned, operated, used or maintained by the party of the first part, party of the first part's licensees or others, and whether or not of record, with reasonable right of entry for the purpose of repairing, reconstructing and replacing same; and

Reserves unto itself, its successors and assigns, all coal, oil, gas, casinghead gas and all ores and minerals of every kind and nature underlying the surface of said premises, together with the full right, privilege and license at any and all times to explore, or drill for and to protect, conserve, mine, take, remove and market any and all such products in any manner which will not damage structures on the surface of said premises.

TO HAVE AND TO HOLD THE SAME, with all the rights, immunities, privileges and appurtenances thereto belonging, unto said party of the second part and unto her heirs and assigns forever, so that neither the said party of the first part, nor its successors or assigns, nor any other person or persons for it or in its name or behalf, shall or will hereafter claim or demand any right or title to the aforesaid premises or any part thereof, but they and each of them shall, by these presents, be excluded and forever barred.

IN WITNESS WHEREOF, The said party of the first part has hereunto caused this Deed to be signed on its behalf by its \_\_\_\_\_ President, thereunto duly authorized so to do, and to be attested by its \_\_\_\_\_ Secretary, and has caused its common seal to be hereunto affixed the day and year first above written.

CHICAGO, ROCK ISLAND AND PACIFIC  
RAILROAD COMPANY

By

William J. Dixon  
President

William J. Dixon



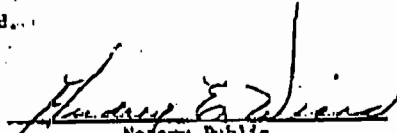
Secretary  
E. F. Wilkinson



STATE OF ILLINOIS )  
 ) SS  
COUNTY OF COOK )

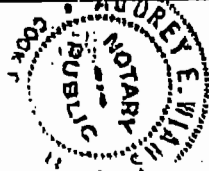
BE IT REMEMBERED, That on this 18th day of October, A. D., 1974,  
before me, the undersigned, a Notary Public in and for the County and State aforesaid,  
came William J. Dixon, - - - President of CHICAGO, ROCK ISLAND AND  
PACIFIC RAILROAD COMPANY a corporation duly organized, incorporated and existing under  
and by virtue of the laws of Delaware and E. F. Wilkinson, - - - -  
Secretary of said corporation, who are personally known to me to be such officers, and  
who are personally known to me to be the same persons who executed, as such officers,  
the within instrument of writing on behalf of said corporation, and such persons duly  
acknowledged the execution of the same to be the act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my notarial  
seal the day and year last above mentioned.

  
Notary Public  
Audrey E. Wians

Term Expires:

December 1, 1977



State of Kansas, Brown County, SS,  
Filed for record at 2:45 o'clock P.M.  
and recorded in book 288 page 307

A F F I D A V I T

OCT 23 1974

REGISTER OF DEEDS

By \_\_\_\_\_ Deputy

STATE OF ILLINOIS )  
                          ) SS  
COUNTY OF COOK        )

O. C. THOMPSON, having been duly sworn, deposes and states that:

I am Manager-Real Estate of and for CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY, a Delaware corporation, Mortgagor under an Indenture dated as of January 1, 1950, wherein THE FIRST NATIONAL BANK OF CHICAGO, a national banking association, having its office in the City of Chicago, Illinois, and JOSEPH C. WILLIAMS of the City of Kansas City, Missouri, are Trustees.

In order to enable said Mortgagor to convey lands no longer necessary to it in the conduct of its business free and clear of the Mortgage without obtaining a formal written release when the consideration received therefor does not exceed TEN THOUSAND AND 00/100 (\$10,000.00) DOLLARS, the Mortgage provides in Article IX, Section 2(b), as follows:

"SECTION 2. Except as hereinafter specifically provided in this Section 2, the Company while remaining in possession of the mortgaged property may, without obtaining a release from, action by, or giving notice to the Trustees, and without other action or proceeding on the part of the Company hereunder:

\* \* \* \* \*

"(b) In the ordinary course of its business, sell, exchange or otherwise dispose of, free from the lien of the Mortgage, any buildings, bridges, structures, industrial tracks, side tracks or yard tracks which it has been desirable in the conduct of its business to retire from use, and any land constituting abandoned right of way or station grounds, or industrial sites or other land (with or without improvements thereon) which is no longer useful to the Company, if the consideration received on any such sale or other disposition does not exceed \$10,000; provided that if the Company shall receive any cash or other consideration (other than property, which may but need not have a similar substitutional use, and which shall become subject to the lien of the Mortgage) on any such sale or other disposition, it shall from time to time, but at intervals of not more than 6 months, deposit with the Corporate Trustees, or with the trustee or mortgagee of any Prior Lien or Permitted Encumbrance as permitted

by the provisions of Section 4 of this Article IX, an amount in cash equal to the cash so received and the fair value to the Company of such other consideration;"

By quitclaim deed dated the 18th day of October, 1974, CHICAGO, ROCK ISLAND AND PACIFIC RAILROAD COMPANY conveyed unto MARY CHADWELL - - - - - certain land situated in Franklin, Brown County, Kansas - - - - -, which land had been determined by said Company to be no longer necessary to it in the conduct of its business. And the consideration received by the Company for the land being less than TEN THOUSAND AND 00/100 (\$10,000.00) DOLLARS, said land was by virtue of the above quoted provision conveyed free and clear of said Mortgage. Further affiant saith not.

Dated at Chicago, Illinois, this 18th day of October, 1974.

O. C. Thompson  
Manager-Real Estate for  
Chicago, Rock Island and Pacific  
Railroad Company

Subscribed and sworn to before me and in my presence by the said  
O. C. THOMPSON this 18th day of October, 1974.

Audrey E. Wians  
Notary Public in and for Cook County,  
Illinois  
Audrey E. Wians

My Commission Expires:  
December 1, 1977



THIS INDENTURE made and entered into this 25th day of May, 1976,  
by and between WILLIAM M. GIBBONS, Trustee of the Property of the CHICAGO, ROCK ISLAND  
AND PACIFIC RAILROAD COMPANY, Debtor, as Trustee and not as an individual, party of  
the first part, and the CITY OF POWHATTAN, Brown County, State of Kansas, party of  
the second part.

W I T N E S S E T H:

That in consideration of the sum of FIVE HUNDRED AND NO/100 (\$500.00) DOLLARS,  
to him paid by the party of the second part, the receipt of which is hereby acknowledged,  
the party of the first part does by these presents grant unto the party of the second  
part, its successors and assigns, an easement for sewer line and appurtenances, thirty  
(30) feet wide in, under and through the right-of-way of said party of the first part,  
the centerline of said easement being described as follows:

Beginning at a point on the right-of-way line of said Railroad  
Company 590 feet, more or less, south and 100 feet, more or  
less, west of the center corners of Section 28, Township 3  
South, Range 16 East of the Sixth Principal Meridian in Brown  
County, Kansas; thence in a northwesterly direction 322 feet,  
more or less, to a point on the north right-of-way line of said  
Railroad Company, 400 feet, more or less, south and 360 feet,  
more or less, west of said center corner of said Section 28

It is further agreed between the party of the first part and the party of  
the second part hereto that in addition to the 20-foot permanent right-of-way and  
easement that said party of the first part further grant to the CITY OF POWHATTAN,  
in width, being 15 feet wide on each side of the above described tract,  
Brown County, Kansas, a temporary construction easement of 30 feet in addition to the  
permanent right-of-way and easement mentioned above. Said construction easement will  
be for a period from the date of this easement and right-of-way agreement to the final  
check out of the sewer line after the same is in operation, at which time the said  
construction easement shall automatically release.

Party of the second part agrees that it will at all times indemnify and  
save harmless the party of the first part, his tenants, agents and employees, against  
all claims, demands, actions, or causes of action, arising or growing out of loss of  
or damage to property or injury to or death of persons or livestock, resulting in any  
manner from the construction, maintenance, use, state of repair or presence of the

pipeline upon party of the first part's premises, or the removal of said pipeline therefrom irrespective of whether any act or omission of party of the first part, his tenants, agents or employees shall cause or contribute thereto, and shall promptly pay to the party of the first part the full amount of any loss or damage which the party of the first part may sustain, incur, or become liable for, and all sums which the party of the first part may pay or be compelled to pay in settlement of any claim on account thereof.

In the event the said party of the second part shall cease to use the above described premises for the purposes herein set forth, then all rights herein granted shall terminate and all right, title and interest in and to said premises shall immediately vest in said party of the first part.

Notwithstanding any other provision of this instrument, party of the first part shall in no event incur liability to party of the second part for failure of or defect in the title or estate of party of the first part in and to the property above described.

IN WITNESS WHEREOF, this instrument is executed in the name of the Trustee and on his behalf by O. C. Thompson, his Manager-Real Estate thereunto duly authorized and by the party of the second part herein named the day and year first above written.

WITNESS:

*[Signature]*  
Secretary for Trustee  
B. W. Crum

WILLIAM M. GIBBONS, Trustee of the  
Property of the CHICAGO, ROCK ISLAND  
AND PACIFIC RAILROAD COMPANY, Debtor

By *[Signature]*  
Manager-Real Estate  
O. C. Thompson

ATTEST:

*[Signature]*  
City Clerk  
Ralph Kneisel

CITY OF FOWHATTAN, KANSAS

By *[Signature]*  
Mayor  
Lester Boyer



State of Kansas, Brown County, SS.  
Filed for record at 1:10 o'clock P.M.  
and recorded in book 292 page 337

JUN 7 1976

*[Signature]*  
REGISTER OF DEEDS  
By \_\_\_\_\_ Deputy

STATE OF ILLINOIS )  
COUNTY OF COOK ) SS

On this 2nd day of June, A. D., 1976, before me, the undersigned, a Notary Public in and for said County, in said State, personally appeared O. C. Thompson, Manager-Real Estate for the Trustee aforesaid, to me known to be the identical person named in and who executed the foregoing instrument, and acknowledged that he executed the same as his voluntary act and deed and to be the voluntary act and deed of the Trustee aforesaid.



Audrey E. Wilans  
Notary Public  
Audrey E. Wilans

STATE OF KANSAS )  
COUNTY OF BROWN ) SS

BE IT REMEMBERED, That on this 25th day of May, A. D., 1976, before me, the undersigned, a Notary Public in and for the County and State aforesaid, came Lester Boyer, Mayor of the City of Pawhattan, Kansas, a municipal corporation, and Ralph Knoisel, City Clerk of said City, who are personally known to me to be such officials, and who are personally known to me to be the same persons who executed, as such officials, the within instrument of writing on behalf of said City by authority of the City Council, as contained in Resolution No. 63 of said City Council, passed on the 25th day of May, 1976, and such persons duly acknowledged the execution of the same to be the act and deed of said City.



IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my notarial seal, this day and year last above mentioned.

Ruth E. Robbins  
Notary Public  
Ruth E. Robbins

Appt. Expires: Oct. 22, 1979

1981 Aerial





REGISTRATION FEE  
Amount of indebtedness \$ 275,000.00 687.50  
WBC 118 30 January 1984  
Dennis J. Gensel  
Register of Deeds, Brown County, Kansas

REAL ESTATE MORTGAGE  
and  
CHattel SECURITY AGREEMENT  
(With Future Advance Clause)

Filed for record at 1:35 p.m. on Jan 30 1984  
and recorded in book 316, page 142  
\$8.00  
JAN 30 1984  
Dennis J. Gensel  
REGISTER OF DEEDS

THIS SECURITY INSTRUMENT dated this 11th day of January, 1984, between  
The Brown County Cooperative Association  
a cooperative corporation organized and existing under the laws of the State of Kansas, whose mailing address  
is Route 5, Box 1, in Hiawatha, County of Brown  
State of Kansas, hereinafter called the Borrower, and the Wichita Bank for Cooperatives, a corporation  
organized and existing under the Farm Credit Act of 1971, an amended, whose mailing address is 151 N. Main, in the City of Wichita,  
State of Kansas, hereinafter called the Bank.

WHEREAS, the Borrower has given the following described promissory notes to the Bank as evidence of actual loans made or  
to be made to the Borrower by the Bank. Each note bearing interest at the rate provided therein, such interest being payable quarterly  
on the first day of March, June, September, and December of each year until the loan is paid in full.

Date of Note

Amount

Final Due Date

May 12, 1982

\$275,000.00

On Demand

NOW, THEREFORE, in order to secure the payment of said notes, all sums advanced thereon and all sums repaid and then re-  
advanced thereon whether required or discretionary, together with all interest and all additional sums advanced to the Borrower of  
its successors by the Bank, such additional sums being limited insofar as the balance outstanding at any one time is concerned to  
a NONE as to any real property described hereafter, but being unlimited insofar as chattel property  
described hereafter is concerned, such additional sums being evidenced by the Borrower's notes and bearing interest as provided  
in said notes, and to secure the performance and observance of covenants and conditions herein contained, the Borrower hereby  
mortgages all of the following real property and gives a security interest in all of the following chattel property and the proceeds and  
products thereof, to the Bank. Said property being described as follows, and located in the County of Brown  
State of Kansas, to-wit:

POWHATTAN:

TRACT I

From a point 1,800 feet South of the center of Section 28, Township 3 South, Range 16  
East, Brown County, Kansas, where the East line of Southwest Quarter of Section 28  
intersects the original centerline of Rock Island Railroad; thence North 26° West along  
centerline of railroad 1409.5 feet; thence North 64° East 150 feet for a point of  
beginning on the East railroad right-of-way; thence North 26° West 1110.0 feet; thence  
South 64° West 200 feet; thence South 26° East 1110.0 feet; thence North 64° East 200  
feet to the place of beginning, containing 5.10 acres.

Together with all fixtures and equipment presently or hereafter used in connection  
therewith, including but not limited to the following items:

- (a) A 50' x 80' frame bulk fertilizer plant with: scale, blender and loadout conveyor.
- (b) A 550,000-bushel concrete and steel grain elevator with: all equipment used in the elevating and handling of grain including grain dryers.
- (c) A 50' x 60', 40' x 60' and 60' x 60' office, store and merchandise warehouse with: one 50-ton Fairbanks Morse truck scale with printer and 70 foot deck.
- (d) A 40' x 80' steel service station and cafe with: service station equipment complete; restaurant equipment complete.
- (e) A steel feed mill with: Roskamp roller mill.
- (f) A 120,000-bushel Quonset steel grain storage building with: elevator leg; dump with filling equipment.
- (g) A 36,000-gallon steel NH3 plant with: tanks with related plumbing and pumps.

HIAWATHA:

TRACT II

A tract of land in the Southwest Quarter, Section 29, Township 2 South, Range 17 East,  
of the 6th P.M., Brown County, Kansas, described as:

Beginning at a point on the West line of said quarter, said point being 549.1  
feet South of the Northwest corner of said quarter; thence East parallel with  
the North line of said quarter, 906.1 feet; thence South, parallel with the

Partial Release Book 320 - Page 163



The Brown County Cooperative Association  
Hiawatha, Kansas  
Page 2

West line of said quarter, 555.1 feet; thence West parallel with the North line of said quarter, 561.3 feet; thence North parallel with the West line of said quarter, 10.2 feet; thence West parallel with the North line of said quarter, 344.8 feet to a point on the West line of said quarter; thence North along the West line of said quarter, 544.9 feet to the point of beginning, EXCEPT: a tract deeded to the UNION PACIFIC RAILROAD COMPANY, as shown by deed dated February 24, 1969, and recorded April 16, 1969, in Book 270 at Page 425 in the Office of the Register of Deeds, Brown County, Kansas.

Together with all fixtures and equipment presently or hereafter used in connection therewith, including but not limited to the following items:

- (a) A 350,000-bushel concrete grain elevator with 400,000-bushel annex with: complete grain elevator equipment that includes two 7,000 bph logs, grain dryer and multi-car loading spouts.
- (b) A steel office, store and warehouse with: 70' truck receiving scale.
- (c) A steel feed mill with: original feed mill equipment, complete.
- (d) A frame bulk fertilizer plant.
- (e) A pole frame, ironclad warehouse and storage facility.

TRACT III

A tract of land in the Southwest Quarter, Section 29, Township 2 South, Range 17 East, of the 6th P.M., Brown County, Kansas; described as:

Beginning at a point 330 feet (20 rods) South of the intersection of the East line of Tenth Street and the South line of Iowa Street in the City of Hiawatha, Kansas, said point being 955.6 feet East and 365 feet South of the Northwest corner of said Northwest Quarter; thence East, parallel with the North line of said quarter, 491.7 feet; thence South, parallel with the West line of said quarter, 246.5 feet to a point on the North right-of-way line of St. Joseph and Grand Island Railroad; thence following said North right-of-way line, South 86° West, 29.8 feet; North 47.5 feet; South 83° 49' West, 464.7 feet to the point on the East line of Tenth Street extended South; thence North, parallel with the West line of said quarter, 251.1 feet to the point of beginning.

Together with all fixtures and equipment presently or hereafter used in connection therewith.

TRACT IV

A tract of land in the Southwest Quarter, Section 29, Township 2 South, Range 17 East, of the 6th P.M., Brown County, Kansas; described as:

Beginning at a point 1040.4 feet South of the intersection of the East line of Tenth Street and the South line of Iowa Street in the City of Hiawatha, Kansas, said point being 955.6 feet East and 1075.4 feet South of the Northwest corner of said Northwest Quarter; thence East, parallel with the North line of said quarter, 853.8 feet to a point on the Westerly right-of-way line of the St. Joseph and Grand Island Railroad; thence following said right-of-way line North and Westerly, North 11° 17' West, 83.0 feet; North 20° 35' West, 100.0 feet; North 37° 21' West, 100.0 feet; North 53° 55' 30" West, 100.0 feet; North 69° 21' 30" West, 100.0 feet; North 85° 21' 30" West, 105.7 feet; North, 27.5 feet; South 83° 49' West, 464.7 feet to a point on the East line of Tenth Street extended; thence South, parallel with the West line of said quarter, 334.3 feet to the point of beginning.

Together with all fixtures and equipment presently or hereafter used in connection therewith, including but not limited to the following items:

- (a) A 75,000-gallon steel bulk fuel plant, complete.
- (b) A 56,000-gallon steel LP gas plant, complete with plumbing and pumping equipment.

TRACT V

All structures, additions and improvements on that portion of the right-of-way of the St. Joseph and Grand Island Railway Company and its lessee, the Union Pacific Railroad Company at Hiawatha, Brown County, Kansas, described as follows:

Beginning at a point on the North right-of-way line approximately 180 feet East of the intersection of the North right-of-way line and the East line of Tenth Street; thence South at right angles a distance of 64 feet; thence Easterly parallel to and 9.5 feet from the railroad siding a distance of 137 feet; thence North 14 feet; thence West 19 feet; thence Northerly at right angles to the North right-of-way a distance of 60 feet; thence Westerly along the North right-of-way line a distance of 118 feet to the point of beginning.

Said Property including but not limited to the following items:

- (a) Ammonia plant complete with plumbing and pumping equipment.

TO HAVE AND TO HOLD the above described real property and chattels unto the Bank, its successors and assigns, until all loans, advances, future advances and loans are paid in full, and this instrument is released and terminated by the Bank.

1. That the Borrower is the same party customarily referred to in a mortgage as the Mortgagor and in a security agreement as the Debtor; the Bank is the same party customarily referred to in a mortgage as the Mortgagee and in a security agreement as the Secured Party.
2. That the Borrower holds absolute title to the above described property free and clear of all liens, encumbrances, mortgages and security agreements other than such interests held by the Bank, and the Borrower will warrant and defend the property and interest of the Bank against the claims and demands of all persons.
3. That the statements contained in the Borrower's application or applications are true and that the proceeds of the loan or loans secured hereby will be used solely for the purposes set forth in the loan agreements between the Borrower and the Bank.
4. That the Borrower will not execute any mortgages, financing statements or security agreements covering the above described property, except in favor of the Bank.
5. That the Borrower will execute a financial statement and such further and additional documents or instruments as the Bank may require, and will see that such instruments are properly filed or recorded, and will allow the Bank to actually take possession of any collateral described above in order to perfect or protect its interests under this instrument, if the Bank may so request.
6. That the Borrower will pay when due all indebtedness secured hereby, including interest and future advances, together with all costs and expenses of collection, including reasonable attorney's fees, if any there shall be at any time.
7. That the Borrower will keep all property described herein in good repair during the continuance hereof and will not cause, suffer, or permit waste thereon.
8. That the Borrower will furnish, at its own expense, any abstracts of title, abstracts of chattel lien, title insurance, Torrens certificates or other evidence of title required by the Bank.
9. That the Borrower will pay when due all taxes, levies, assessments or claims which are or may become liens against the above described property. That the Borrower will keep the above described property insured in such manner as the Bank may require. That the Borrower will pay all rental or lease payments required for the location of the above property, in the event the Bank pays any rents, taxes, lease payments, levies, charges, insurance premiums or other charges affecting the said property, the same shall become a part of the debt secured hereby and shall be payable on demand with interest thereon at the rate of six per cent per year.
10. That nothing herein contained shall be construed to obligate the Bank to make any loan or advances to the Borrower, and that the sole purpose of this instrument is to provide security for presently existing indebtedness, and for loans and advances which may in the absolute discretion of the Bank be made hereafter.
11. That the Borrower will perform and observe all of the terms and conditions of all loan agreements entered into between the Borrower and the Bank.
12. That the Borrower will, at all times during the existence of any part of the debt herein secured, maintain its corporate existence and operate its business as a cooperative association as that term is defined by Agricultural Marketing Act of 1929, as amended.
13. That the Borrower will not voluntarily transfer, sell or convey, nor allow an involuntary transfer by way of attachment, levy, garnishment or other judicial process, of any of the property covered by this instrument without the express written consent of the Bank, or unless the typed portion of this instrument provides to the contrary for specific items of collateral.
14. That in any instance in which notice to the Borrower is required, such notice shall be deemed sufficient and commercially reasonable when mailed by first class mail to the Borrower at the address given in this instrument. All arrangements for forwarding such notice if necessary and all failure on the part of the postal authorities shall be the responsibility of the Borrower.
15. That the Bank may examine any of the above property at any reasonable time and may at the Borrower's expense, examine the books, records, and documents of the Borrower, or require the same to be examined by an auditor approved by the Bank.
16. That the Borrower will promptly adopt and in good faith carry out any reasonable recommendations made by the Bank as to the Borrower's business practices, procedures, or personnel.
17. That if default shall be made in the payment of any principal sum, or interest thereon, or future advances, or interest thereon, or upon any change of ownership of any property described herein without the Bank's consent then the Bank may elect without notice that the whole of the sum hereby secured, together with interest thereon shall become immediately due and payable, and the Bank may enforce payment thereof and all sums expended under the terms of this mortgage by foreclosure or otherwise.
18. That if the entire balance secured hereby is declared immediately due and payable, the Bank may immediately have a receiver appointed to protect and operate the property covered by this instrument. Any funds derived by the receiver may in his absolute discretion be used to pay current or past due taxes, insurance premiums or lease payments and may also be used to paint, patch, clean up, repair or improve the property covered by this mortgage.
19. That in case of default as aforesaid, the Bank may proceed in any commercially reasonable manner and may have the real or personal property covered by this instrument sold in separate parcels or as one unit, at the Bank's sole option. The Bank may dispose of any of the personal property, credit the proceeds as the Bank may reasonably determine, and then foreclose the mortgage on the real property and remaining personal property.
20. That the Bank may require the Borrower to, assemble the collateral in case of default as aforesaid, and make such collateral available to the Bank at a place to be designated by the Bank which is reasonably convenient to both parties.
21. That the Borrower hereby waives appraisal should the Bank elect to accept such waiver at the time any foreclosure action may be filed hereunder. In Kansas the Borrower, being a corporation, hereby wholly waives the period of redemption ordinarily allowed in case of mortgage foreclosure. In New Mexico the parties hereby agree that the period of redemption shall be shortened to one month. In Colorado the parties hereby agree that the land described above is not agricultural real estate as that term is used in the Colorado Statutes.
22. That in the event of foreclosure, the Bank will account for any surplus remaining after the payment of all principal, interest and other charges provided herein or by law, and the Borrower will be liable for any deficiency regardless of the classification of the collateral covered herein.
23. That in case any of the collateral described herein is left or placed in the Bank's possession, the Borrower will retain the obligation to preserve or pursue all rights against prior parties and the Bank is not responsible therefor. The Bank may use or operate the collateral for the purpose of preserving it, or its value, or pursuant to court order, whenever the Bank has possession of the collateral. Such use may be in any manner considered to be proper or advantageous by the Bank, its agents, or representatives, at the time such collateral is put to use.
24. That no remedy herein conferred on the Bank is intended to be exclusive of any other remedy or remedies, and each remedy shall be cumulative and shall be in addition to every other remedy given hereunder, or now or hereafter existing at law, or in equity or by statute.
25. That the omission of the Bank to exercise any option hereunder, in case of any default by the Borrower, shall not preclude the Bank from the exercise thereof at any subsequent time, or for any subsequent default, and nothing but a written contract of the Bank shall be a waiver of any option.
26. That all the covenants and agreements of the Borrower shall extend to and bind its successors and assigns and all rights and privileges of the Bank under this instrument shall inure to the benefit of its successors and assigns.

This instrument is executed by the Borrower pursuant to the resolution of its Board of Directors.

IN WITNESS WHEREOF, this instrument is executed by the proper officers and its corporate seal is affixed hereto.

(SEAL) Robert P. Knudsen  
ATTEST: Robert P. Knudsen  
Secretary

The Brown County Cooperative Association  
By: Don V. Knudsen  
President

#### CORPORATE ACKNOWLEDGEMENT

STATE OF KANSAS COUNTY OF BROWN  
On this 25 day of January, 1934, before me appeared Don V. Knudsen  
to me personally known, who being by me duly sworn did say that he is the President of The Brown  
County Cooperative Association

that the seal affixed to said instrument is the corporate seal of said corporation and that said instrument was signed and sealed in behalf of said corporation by authority of its Board of Directors, and acknowledged to me that he executed the same as his free and voluntary act and deed as the free and voluntary act and deed of said corporation for the uses and purposes therein set forth.

Witness my hand and notarial seal the day and year in this certificate above written

(SEAL)

My commission expires

January 13, 1934

Daryl J. Meyer  
Notary Public

THIS DEED GIVEN TO REPLACE THAT DEED DATED SEPTEMBER 20, 1985.

State of Kansas, Brown County, Kan.

Filed for record at 12:00 clock. A.

and recorded in book 322, page 348-353

Entered in Transfer Record

in my office this 7 day

on 10 A.D. 1986

Barbara Meyer  
County Clerk

## QUITCLAIM DEED

\$10.00 APR 07 1986

Nancy D. Reynolds  
REGISTER OF DEEDS

By \_\_\_\_\_ Deputy

KNOW ALL MEN BY THESE PRESENTS That CHICAGO PACIFIC CORPORATION, a Delaware corporation, whose principal place of business is 200 South Michigan Avenue, Chicago, Illinois 60604 ("Grantor"), in consideration of the sum of TEN DOLLARS (\$10.00) and other good and valuable consideration, the receipt whereof is hereby acknowledged, does hereby QUITCLAIM, subject to the terms, conditions, reservations and exceptions hereinafter set forth, unto DIRT AND GRAVEL, INC., whose address is 725 Houston Street, Manhattan, Kansas 66502, herein designated as "Grantee," all of Grantor's right, title and interest, estate, claim and demand, if any, in the following described parcel of land situated in the County of Brown, State of Kansas, as described on the Exhibit A attached hereto and made a part hereof.

The descriptions contained herein notwithstanding, the intent of this document is to convey all right, title and interest of the Grantor wherever evidenced, monumented or located in the County aforesaid, less and except any prior recorded conveyances.

The Grantor further reserves unto itself, its successors, grantees and assigns, exclusive perpetual easements for the construction, erection, installation, operation and maintenance of transportation and transmission systems for all and every type of energy by whatever means, except by railroad, including but not limited to, pipeline, telephone, radio, radar or laser transmission systems wire, fibers, conduits, utility and energy transmission lines of every kind and character together with all necessary supporting devices which may be constructed, erected or installed in, on, under, above, across and along any portion of the premises lying within fifty (50) feet of the centerline of Grantor's former main railroad track(s), including the right to reconstruct, re-erect, and to reinstall each and every transportation or transmission facility herein contemplated. The exercise of the rights hereby reserved shall not unreasonably interfere with Grantee's use of the surface. All rights hereby reserved shall continue forever, whether or not exercised, unless expressly relinquished in writing by the Grantor, its successors or assigns.

The Grantor reserves for itself, its successors and assigns, an easement for the continued maintenance, operation and use of all existing driveways, roads, conduits, sewers, water mains, gas lines, electric power lines, communication lines, wires and other utilities and easements of any kind whatsoever on said premises, whether or not of record, whether owned, operated, used or maintained by Grantor, the Grantor's licensees or others, with the reasonable right of entry for the purpose of repairing, reconstructing and replacing same; and the Grantor further reserves unto itself, its successors and assigns, the right and privilege to convert existing licenses, leases and agreements, for driveways, roads, conduits, sewers, water mains, gas lines, electric power lines, wire and other utilities to permanent easements by issuance of a suitable grant in recordable form for a period of one hundred twenty (120) days following the date hereof.

By acceptance of this Quitclaim Deed, Grantee acknowledges that such interests as Grantor may have had in the mineral estate of the Property were conveyed, by Quitclaim Deed dated March 15, 1986, to INTERNATIONAL MINING CORPORATION, a Delaware corporation with a business address C/O PACIFIC HOLDING CORPORATION, 10900 WILSHIRE BOULEVARD, LOS ANGELES, CALIFORNIA 90024. Grantee acknowledges that the conveyance of the mineral estate obligates Grantee to permit the legal holder of said mineral estate at any and all times the right, privilege and license to lawfully explore, drill for, protect, conserve, mine, take, extract, remove and market all ores and minerals of every kind, provided that such activities do not unreasonably interfere with the use, operation and maintenance of the Property by Grantee, its designees, successors or assigns.

Notwithstanding any other provision of this instrument, the Grantor shall in no event incur liability to the Grantee for failure of or defect in the title or estate of the Grantor in and to the property herein described.

This conveyance is made pursuant to the terms of a Purchase Agreement dated May 21, 1985, and the terms thereof shall survive delivery of this Quitclaim Deed.

IN WITNESS WHEREOF, this instrument is executed by the Grantor this 1st day of April, 1986.

ATTEST:

CHICAGO PACIFIC CORPORATION

Howard E. Taylor  
Secretary

A. Steven Crown  
Vice President

STATE OF ILLINOIS        )  
                                  ) SS  
COUNTY OF COOK        )

I, the undersigned, a Notary Public, in and for the County and State aforesaid, do hereby certify that A. STEVEN CROWN, personally known to me to be the Vice President of CHICAGO PACIFIC CORPORATION, a Delaware corporation, and Howard E. Taylor, personally known to me to be the Asst. Secretary of said corporation, and personally known to me to be the same persons whose names are subscribed to the foregoing instrument, appeared before me this day in person and acknowledged that as such Vice President and Asst. Secretary they signed and delivered the said instrument as Vice President and Asst. Secretary of said corporation, and caused the corporate seal of said corporation to be affixed thereto, pursuant to authority given by the Board of Directors of said corporation as their free and voluntary act, and as the free and voluntary act and deed of said corporation for the uses and purposes therein set forth.

Given under my hand and seal this 1st day of April, 1986.



Mary Nell Jackson  
Notary Public

My Commission Expires:

November 1, 1987

EXHIBIT A

Beginning at the intersection of the centerline of the Grantor's former main track and the South line of Section 36, Township 4 South, Range 16 East, being the South line of Brown County, Kansas; thence Easterly along said centerline through Section 36, Township 4 South, Range 16 East; thence Easterly through Sections 31, 32, 33, 34, 35 and 36, Township 4 South, Range 17 East (including Section 4, Township 5 South, Range 17 East, Atchison County, Kansas); thence Easterly through Sections 31, 32, 33, 34, 35 and 36, Township 4 South, Range 18 East to a Termination at the East line of Brown County, Kansas,

AND

Beginning at the intersection of the centerline of the Grantor's former main track and the East line of Section 31, Township 4 South, Range 17 East; thence Northwesterly through Sections 31 and 30, Township 4 South, Range 17 East; thence Northwesterly through Sections 25, 24, 23, 14, 15, 10 and 8, Township 4 South, Range 16 East; thence Northwesterly through Sections 14, 33, 28, 31, 30, 17 and 18, Township 3 South, Range 16 East; thence Northwesterly through Sections 13, 12, 11 and 2, Township 3 South, Range 15 East; thence Northwesterly through Sections 35, 34, 27, 28, 29, 20, 19, 17, 18 and 7, Township 2 South, Range 15 East, to a Termination at the West line of Brown County, Kansas.

Being a part of those interests Grantor's predecessor Chicago, Kansas & Nebraska Railway and Chicago, Rock Island and Pacific Railway acquired through instruments filed with the Brown County, Kansas Recorder at the following book and page:

<u>BOOK</u>	<u>PAGE</u>
104	322
22	369
26	149
32	265
40	174
40	267
45	220
22	430
22	432
22	380
22	386
22	410
22	493
74	79
22	409
22	470
22	476
22	422
22	412
22	403

Book 322 Page 352

EXHIBIT A - continued

<u>BOOK</u>	<u>PAGE</u>
22	418
22	518
22	420
22	518
22	420
22	557
22	354
22	563
22	282
22	479
22	320
26	282



Section 31, Township 4, Range 17 - SW1/4, SE1/4  
Section 32, Township 4, Range 17 - SW1/4, NW1/4  
Section 34, Township 4, Range 17 - SW1/4, SE1/4  
Section 35, Township 4, Range 17 - All in section  
Section 36, Township 4, Range 17 - All in section  
Section 31, Township 4, Range 18 - NW1/4, NE1/4  
Section 32, Township 4, Range 18 - NW1/4, NE1/4  
Section 33, Township 4, Range 18 - NW1/4, NE1/4  
Section 34, Township 4, Range 18 - NW1/4, NE1/4  
Section 35, Township 4, Range 18 - NE1/4, SE1/4  
Section 36, Township 4, Range 18 - SW1/4, SE1/4, NE1/4

City of Fairview - Tract of land 150' x 212' lying SW'ly of intersection of Main & Commercial Streets; consisting of @ .74 acres (Book O&M, Tract 1)

City of Fairview - Tract in N1/2 NW1/4 along RR right-of-way in 27-2-15 & 34-2-15; consisting of @ 5.47 ac (Book 21, Tract 17)

City of Horton - Tract in SW1/4 of 33-4-17; consisting of @ 7.41 acres (Book O&M, Tract 1)

City of Powhattan - A parcel of land 200' x 1110' in W1/2 of 28-3-16; consisting of @ 5.10 acres (Book O&M, Tract 1)

\*tax statement says this was sold to Brown County Coop 2-25-72, but RR was being taxed evidently??

City of Powhattan - A parcel of land 170' x 500' x 150' x 575' in NW1/4 28-3-16; consisting of @ 1.85 ac (Book O&M, Tract 2)

\*tax statement says this was sold to Mary Chadwell 10-18-74, but RR was being taxed evidently??

City of Powhattan - NW1/4 & SW1/4 in 28-3-16 consisting of @ 6.83 acres (Book 27, Tract 114)

\*1.85 A. to Chadwell according to tax statement

## Corporation Deed (General Warranty)

STATE OF KANSAS,  
BROWN County, ss

This instrument was filed for record on the 25 day of August A.D. 19 86, at 12:10 o'clock P.M., and duly recorded in Book 322 of Deeds, at page 662-663

*W. C. Meyer*  
Register of Deeds.  
By \_\_\_\_\_ Deputy.

## FEES

Register of Deeds,  
for recording, \$ 6.00  
County Clerk, for Transfer,  
Total, \$ 6.00.

Entered in Transfer Record  
in my office, this 26  
day of August A.D., 1986.

*Darlene Meyer*  
County Clerk.

THIS INDENTURE Made this \_\_\_\_\_ day of August

A.D. 19 86, between DIRT AND GRAVEL, INC.

a corporation duly organized, incorporated and existing under and by virtue of the laws of the State of Kansas and having its principal place of business at 302 Union National Bank Tower, Manhattan, Riley County, in the State of Kansas of the first part, and the BROWN COUNTY FARMERS CO-OP

of BROWN County, in the State of Kansas of the second part:

WITNESSETH, That said party of the first part, in consideration of the sum of One Thousand One Hundred and no DOLLARS the receipt of which is hereby acknowledged, does by these presents, Grant, Bargain, Sell, and convey unto said party of the second part, its heirs and assigns, all the following-described real estate, situated in BROWN County and State of Kansas, to wit:

A part of the Chicago Rock Island and Pacific Railroad Company real estate in the City of Powhattan, located in the Southwest 1/4th of Section 28, Township 3 South, Range 16 East, Brown County, Kansas: Beginning at a point on the West property line of a tract previously conveyed from the CRI&P Railroad to the Brown County Farmers Co-operative recorded in Book 280, at Page 118, in the Office of the Brown County Register of Deeds, where said West property line of the Co-op tract intersects the Center Line of Section 28, also the Center Line of Main Street; thence South 26° East approximately 625 feet to the Southwest corner of the said Co-op tract; thence South 64° West 100 feet; thence North 26° West approximately 675 feet to the Center Line of Section 28; thence East approximately 110 feet to the point of beginning, subject to the easement or other rights owned by the City of Powhattan and other easements of record, all containing 1.49 acres, more or less.

TO HAVE AND TO HOLD THE SAME, Together with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in anywise appertaining, forever

And said grantor for itself, its successors and assigns, does hereby covenant, promise and agree, to and with said party of the second part, that at the delivery of these presents it is lawfully seized in its own right, of an absolute and indefeasible estate of inheritance, in fee simple, of and in all and singular the above granted and described premises, with the appurtenances; that the same are free, clear, discharged and unincumbered of and from all former and other grants, titles, charges, estates, judgments, taxes, assessments and incumbrances, of what nature or kind soever;

and that it will warrant and forever defend the same unto said party of the second part, its heirs and assigns, against said party of the first part, its successors and assigns, and all and every person or persons whomsoever, lawfully claiming or to claim the same.

IN WITNESS WHEREOF, the said party of the first part has hereunto caused this Deed to be signed on its behalf by its President thereunto duly authorized so to do, and has caused its corporate seal to be hereunto affixed the day and year first above written

DIRT AND GRAVEL, INC.

(Corporate Seal)

By *E. F. Murray, Jr.*  
E. F. Murray, Jr. President



KANSAS BAR ASSOCIATION

CORPORATION DEED  
GENERAL WARRANTY

STATE OF KANSAS                      RILEY                      COUNTY, ss.

BE IT REMEMBERED, That on this 19th day of August A.D. 19. 86.

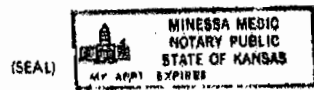
before me, the undersigned, a notary public in and for the County and State aforesaid

came E. F. Murray, Jr. President of DIRT AND GRAVEL, INC.,

a corporation duly organized, incorporated and existing under and by virtue of the laws of

the State of Kansas, who is personally known to me to be such officer, and who is personally known to me to be the same person who executed, as such officer, the within instrument of writing on behalf of said corporation, and such person duly acknowledged the execution of the same to be the act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set my hand, and affixed my official seal the day and year last above mentioned.



*Minessa Medig* Notary Public.  
Term expires April 30, 1990

Entered in Transfer Record in my office this  
 8 day of December, A.D. 1986.  
*Barbara M. Miller*  
 County Clerk

DIRT &amp; GRAVEL, INC.

A corporation duly organized, incorporated and existing under and by virtue of the laws of the  
 State of Kansas and having its principal place of business at Manhattan County  
 of Riley in the State of Kansas

QUIT CLAIMS TO the Brown County Co-op

all the following described REAL ESTATE in the County of Brown

and the State of Kansas, to-wit: A part of the Chicago, Rock Island and  
 Pacific Railroad Company's depot grounds in the City of Powhattan,  
 located in the Southwest Quarter (SW 1/4) of Section 28, Township  
 3 South, Range 16 East, Brown County, Kansas described as follows:  
 Commencing at the center of said Section 28, thence South along  
 the Centerline of said Section 28 a distance of 1800 feet, more  
 or less, to a point on the original Centerline of the Chicago,  
 Rock Island and Pacific Railroad Company's main track; thence  
 North 26° West a distance of 1409.5 feet; thence North 64° East a distance  
 of 150 feet to a point on the East line of said depot grounds being the point  
 of beginning; thence South 26° East 465 feet, more or less, to the Southeast  
 corner of said depot grounds; thence westerly along the South line of said  
 depot grounds a distance of 340 feet, more or less, to the Southwest corner  
 of said depot grounds; thence North 26° West a distance of 320 feet, more or  
 less; thence North 64° East a distance of 300 feet, more or less to the point  
 of beginning.

for the sum of One Thousand Five Hundred dollars and No cents (\$1,500.00).

(Corporate Seal)

STATE OF KANSAS RILEY COUNTY, ss. DIRT &amp; GRAVEL, INC.

BE IT REMEMBERED, That on this 5th day of By *E. F. Murray, Jr.* President

December A.D. 19 86 before me, the undersigned,

a Notary Public in and for the county and State

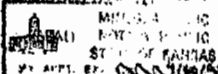
aforesaid came E. F. Murray, Jr. President of

DIRT & GRAVEL, INC. a corporation  
 duly organized, incorporated and existing under and by virtue of

the laws of the State of Kansas, who is per-  
 sonally known to me to be such officer, and who is personally  
 known to me to be the same person who executed, as such officer,  
 the within instrument of writing on behalf of said corporation, and  
 such person duly acknowledged the execution of the same to be  
 the act and deed of said corporation.

IN TESTIMONY WHEREOF, I have hereunto set  
 my hand, and affixed my official seal the

day and year last above mentioned.



Term expires April 30, 1990

53-1-12  
 STATE OF KANSAS  
 BROWN County, ss.

This Instrument was filed for record on the  
 8 day of DECEMBER, A.D. 19 86  
 at 1:50 o'clock P.M. and duly recorded  
 in book 322 of DEEDS  
 at page 926

*Nancy & Reynolds*  
 Register of Deeds.

Deputy.

Fees, \$ 5.00

INTERVIEW

Site: Powhattan Public Water Supply #1  
KSD 781710353  
Brown County, Kansas

Person  
Interviewed: Ralph Kynisel  
Occupation/  
Title: Currently runs the COOP gas station and is the City  
Treasurer.

Reason  
Interviewed: Former employee of the former elevator.

Date: February 29, 1988 Time: 1430

Q: How long did you work at the former elevator?

A: Worked at the former south elevator for about 20 years.

Q: What type of position(s) did you hold?

A: Elevator worker/operator.

Q: What type of fumigant was used at the former south elevator?

A: The south elevator, which was made of wood and the ASC government storage bins used larvacide. Carbon tetrachloride was added to the larvacide to act as a penetrator. This enabled the larvacide to be dispersed throughout the bulk grain. The company that was contracted to do the fumigating was Thomas-Demore Fumigant Company out of Kansas City, Kansas. The current elevator had used very little carbon tetrachloride.

Q: Was any other fumigants used in the area?

A: Not that he was aware of. The former elevators also had the old dry ball fire extinguishers which contained carbon tetrachloride.

Q: Do you know the years of operation of the former facilities?

A: The ASC government storage area consisted of approximately 30 bins that were constructed in 1949 and tore down around 1966. The south elevator was made of wood and was constructed in 1898 and torn down in 1978. The north elevator was not used since the 1930's.

Q: What was the locations of each facility?

A: Mr. Kynisel pointed to the locations of each facility out of his gas station window.

Interviewers: Rick L. Bean - KDHE/BER  
Sandy Voegli - KDHE/BER

1991 Aerial





**Former CCC Grain Bin Storage Facilities Survey -- January 1997**  
(fill out one survey per site)

State Kansas  
County Brown

Site #5

**Name of Person Completing Survey:**

Name Brown County Farm Service Agency  
Address 1310 Oregon  
Hiawatha, KS 66434  
Phone (913) 742-3161

Town: Powhattan

(If the former CCC facility was not located in a town, list the nearest town to the facility. Include the distance and direction of the town from the facility.)

Town Population: 450

**Legal Description of CCC Site:**

TWP 3 Range 16 Section 28 1/4 SW 1/4

**Location of CCC Site:** (Example: Corner of Maple St. and RT. 48)

Across the street of Powhattan City Park

ENCLOSE an aerial photograph of the former site. (If available, provide a copy of the aerial photograph during the time period 1945 through 1970.)

ENCLOSE a topographic map of the town denoting where the former site was located, if available.

Years Site Was in Operation: From 1948 To 1972

**Size of Operation:** (Number of Bins; Size of Bins in Bushels; and Type of Storage Facility -- Steel Bin With Cement Floor, etc.)

Number of Bins (Including Quonset huts): 49  
Size of Bins in Bushels: 3250

4-Wood Bins with wood floor  
Type of Structure: 4 aluminum & 21 steel bins with tin floors, metal sides & sand subsurface

Do bins still exist at the site? Yes \_\_\_\_\_ No x

Who is current owner and operator? Brown County Coop Assn.

Who has owned and operated the site since CCC operation? formerly railroad right-of-way

Continued on the next page

Is the town's drinking water provided by a public water supply system, private wells, or both?  
public water supply system

If the town has a public water supply system, is there a public water supply well(s) within:

½ mile from site? Yes \_\_\_\_\_ No x  
1 mile from site? Yes \_\_\_\_\_ No x

What is the source of the public water supply? (groundwater, reservoir, river, rural water district, etc.)

Brown County Rural Water District #2

If there are private wells in the area used for drinking, is the number of wells known?

Yes \_\_\_\_\_ No x If yes, how many? \_\_\_\_\_

Are there private water wells within:

½ mile from site? Yes x No \_\_\_\_\_ If yes, how many? unknown  
1 mile from site? Yes x No \_\_\_\_\_ If yes, how many? unknown  
We feel sure there are wells within this distance but are unsure of location and number

Is it known whether any private wells in the area have been tested for carbon tetrachloride or other contaminants by EPA and/or State Health Department officials?

Yes \_\_\_\_\_ No unknown--contact Kansas Department of Health and Environment (water has been extensively tested in the Powhattan area)

If yes, please provide the results or a contact person who can provide them.

The public supply system has been tested, carbon tetrachloride.

Private wells have only been tested in towns with CCC bin sites  
and no public water supply system per Scott Satterthwaite, KDH&E.

Continued on the next page

**Have there been any known groundwater problems in the town?** (For example, has the town experienced any elevated levels of pesticides, nitrates, metals in its drinking water; leaking underground storage tanks; or any other known problems?)

Yes ☒ No ☐

**If yes, please describe the type of problem, provide any data or reports that may be available, and list a contact person who is familiar with the problem, such as the town's water commissioner.**

High nitrates in water. Contact Robert Hirsch, former mayor of  
Powhattan and is up-to-date on problems. 913-474-3301

**Is the groundwater flow direction known in the vicinity?**

Yes ☒ No ☐

**If yes, what is the flow direction and provide a reference on how it was determined. If no, identify specific sources or references that you are aware of to obtain this information.**

General flow is toward southeast according to Scott Satterthwaite, KDH&E,  
but each site affected by local streams, aquifers and large wells.

**Are there any non-CCC grain storage facilities currently operating in the town?**

Yes ☒ No ☐

**If yes, please name and describe the type of facility or facilities.**

Elevator-Brown County Coop Assn.

**Were there other non-CCC grain storage facilities in the town that are no longer in operation?**

Yes ☐ No ☒

**If yes, please name and describe the type of facility or facilities.**

Continued on the next page

**Is there a known contact who has information about the former CCC bin site operations?**

Name Wayne Meyer  
Address 209 Delaware  
Hiawatha, KS 66434  
Phone (913) 742-3386

**Contact person's recollections on the operation of the facility:**

Treated almost every year with carbontetrachloride. Last few years  
phos-toxicant used in operation. All chemicals were stored inside  
quonset huts with cement floors and kept dry to prevent rust.

**List and/or attach any sources of information that were used to complete this survey.**

Kansas Dept. of Water Resources 913-296-3717  
Scott Satterthwaite, KDH&E (CCC bin sites with private wells) 913-296-5573  
Dave Waldo, KDH&E (CCC bin sites with public water system)

**Additional information or comments:**

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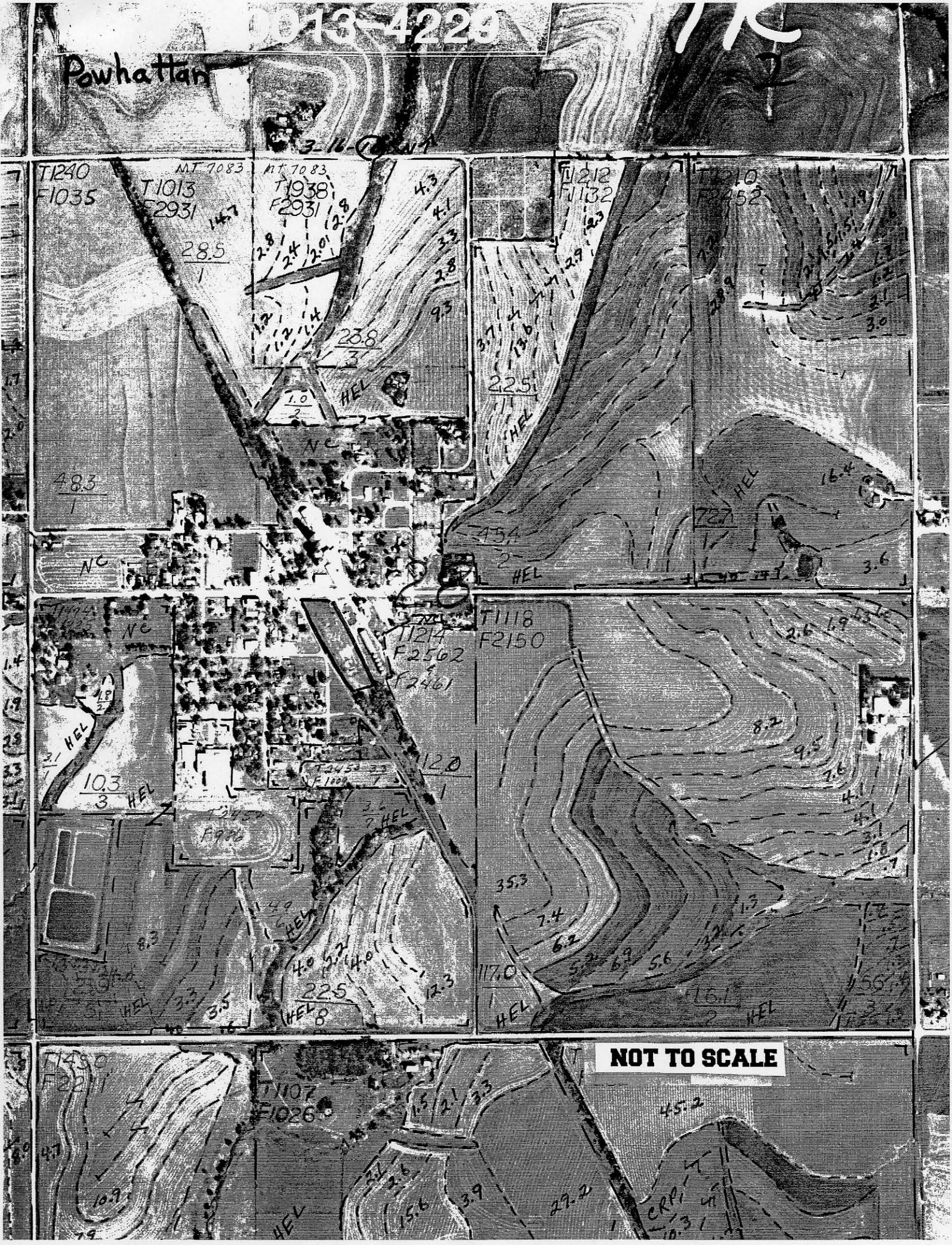
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10-13-4225

7K

Powhattan



NOT TO SCALE



09-732-9

18300000788

**CERTIFICATE OF AMENDMENT TO ARTICLES OF INCORPORATION  
CHANGE OF NAME, REGISTERED ADDRESS AND RESIDENT AGENT  
AND  
INCREASE OF AUTHORIZED CAPITAL**

From: BROWN COUNTY COOPERATIVE ASSOCIATION I.D. No. 0097329  
To: AG PARTNERS COOPERATIVE, INC.

A COOPERATIVE ASSOCIATION

STATE OF KANSAS )  
COUNTY OF Brown ) ss

7890 01-01-06-2000 08:50:46  
97329  
53 CORPORATION CHANGE  
120.00

We, David Christiansen, President, and Larry Ewing, Secretary of **Brown County Cooperative Association**, a cooperative association, organized and existing under the laws of the State of Kansas, The Cooperative Marketing Act, K.S.A. 17-1601 et. seq., and whose registered office is ~~708 S. 10<sup>th</sup> Street~~ <sup>708 S. 10<sup>th</sup> Street</sup>, in the City of Hiawatha, County of Brown, Kansas, 66434 do hereby certify that at the Regular meeting of the Board of Directors of said corporation held on the 26 day of OCTOBER 1999, said Board, by a vote of not less than two-thirds (2/3rds) of the directors, adopted a resolution setting forth the following amendment to the Articles of Incorporation changing the name of **Brown County Cooperative Association** as follows:

BE IT RESOLVED that the name of this association shall be changed to **AG PARTNERS COOPERATIVE, INC.**, by amending Articles I and III of the Articles of Incorporation as follows:

**ARTICLE I**

The name of this association is **Ag Partners Cooperative, Inc.**

**ARTICLE II**

The location of the registered office of the association is 708 S. 10<sup>th</sup> Street, Hiawatha, Brown County, Kansas 66434.

**ARTICLE III**

The name and address of the resident agent of this association in this state is **AG PARTNERS COOPERATIVE, INC.**, 708 S. 10<sup>th</sup> Street, Hiawatha, Brown County, Kansas 66434.

1 8 3 0 0 0 0 7 8 8  
**ARTICLE VII**

Section 1. The capital stock of this association shall be \$8,000,000 and shall be divided into 100,000 shares of common stock, and 40,000 shares of preferred stock, and 20,000 shares of participating stock, all with a par value of \$50 per share.

Section 3. The preferred stock of this association shall be nonvoting and may be purchased, owned, or held by any person, trust, firm, partnership, corporation, limited liability company, or association who has been approved to participate in the savings of this association in accordance with the Bylaws of this association. Dividends at a rate not exceeding the limitations of the Bylaws may, at the discretion of the Board of Directors, be paid on outstanding preferred stock. Preferred stock may be transferred only upon the books of the association and may be redeemed or retired in whole or in part at book or par value, whichever is less, only as conclusively determined by the Board of Directors and only at the discretion of the Board of Directors in accordance with the Bylaws of this association. This association shall have a lien on all its preferred stock for all indebtedness of the holders thereof to the association, which lien may be exercised only at the discretion and direction of the Board of Directors. Upon the dissolution or distribution of the assets of this association, preferred stock shall be entitled to priority over common stock, participating stock and any distribution on account of any non-stock capital accounts or credits, including but not limited to stock credits, ledger credits, revolving fund credits, per unit retains, nonqualified allocation credits and other book credits for which provision is made in the Bylaws, PROVIDED HOWEVER, that upon such dissolution or distribution, the holders of preferred stock shall be entitled to receive the par or book value thereof, whichever is less. Notwithstanding any other provision in these Articles of Incorporation or the Bylaws of this association, the Board of Directors shall have authority, at the Board's sole and absolute discretion to retire, redeem, or repurchase the preferred stock of this association at any time, PROVIDED HOWEVER, that any such retirement, redemption, or repurchase shall be on a pro-rata basis to the holders of all issued and outstanding shares of preferred stock.

Section 4. The participating stock of this association shall be nonvoting and may be purchased, owned or held by any person, trust, firm, partnership, corporation, limited liability company, or association who has been approved to participate in the savings of this association in accordance with the Bylaws of this association. No dividends or interest shall be declared or paid on participating stock. Participating stock may be transferred only upon the books of the association and may be redeemed or retired in whole or in part at book or par value, whichever is less, only as conclusively determined by the Board of Directors, and only at the discretion of the Board of Directors in accordance with the Bylaws of this association. This association shall have a lien on all its participating stock for all indebtedness of the holders thereof to the association, which lien may be exercised only at the discretion and direction of the Board of Directors. Upon the dissolution or distribution of the assets of this association, the holders thereof shall be entitled to receive the par or book value thereof, whichever is less. Each certificate of participating



stock shall have the foregoing provisions of this section printed thereon.

Section 5. Notwithstanding any other provisions of this Article, the Board of Directors shall have the power to retire, in any manner approved by the Board, the common stock, participating stock, preferred stock, or non stock capital accounts of any deceased member or patron, or any patron who, at the determination of the Board of Directors, has ceased to be a producer of agricultural products, or has attained retirement age as defined in, and pursuant to, a plan for the retirement of equities of stockholders and patrons as adopted by the Board of Directors.

Section 6. The Bylaws of this association may provide for and establish such non-stock capital accounts or credits as shall be necessary or proper for the purpose of furthering the cooperative character of this association and for the purpose of providing such additional capital as may be required for the continued effective operation of this association. Such non-stock capital accounts may include, but shall not be limited to, stock credits, ledger credits, revolving fund credits, per-unit retains, nonqualified allocation credits, and such other book credits for which provision is made in the Bylaws; and such credits may be redeemed, retired, or repurchased only in accordance with the said Bylaws of this association. This association shall have a lien upon all such non-stock capital accounts or credits, which lien may be exercised only at the discretion and direction of the Board of Directors.

We further certify that thereafter, pursuant to said resolution and in accordance with the by-laws of the corporation and the laws of the State of Kansas, said Board of Directors called a meeting of stockholders for the consideration of the proposed amendment, and thereafter, pursuant to notice and in accordance with the statutes of the State of Kansas, on the 18 day of NOVEMBER, 1999, said stockholders met and convened and considered said proposed amendment.

We further certify that at said meeting, the stockholders entitled to vote voted in favor of the proposed amendment, which was thereby adopted and ratified by a vote of not less than two-thirds (2/3rds) of the members present and voting.

That said amendment was duly adopted in accordance with the provisions of K.S.A. 17-1608 and 1629 by the affirmative vote of all classes of outstanding voting stock.

IN WITNESSETH WHEREOF, we have hereunto set our hands and affixed the seal of said corporation this 3 day of JANUARY, 2000.

(SEAL)



*Bill*  
*1/3/2000*

*David Christiansen*  
David Christiansen, President

*Ray Ewing* (Sec.)

18300000788

Larry Ewing, Secretary

STATE OF KANSAS

COUNTY OF Brown

ss

Be it remembered, that before me Ray Brintall, a Notary Public in and for the County and State aforesaid, came David Christiansen, President, and Larry Ewing, Secretary, of **Brown County Cooperative Association**, a corporation, personally known to me to be the persons who executed the foregoing instrument of writing as Chairman and Secretary, respectively, and duly acknowledged the execution of the same this 3 day of January, 2000.



1/4/2000

Notary Public

My commission expires JUNE 29, 2000

Submit in duplicate to: Kansas Secretary of State  
Capitol, 2nd Floor  
Topeka, KS 66612

A fee of \$20.00 must accompany this form.

NOTE: This form must be used if the foregoing resolution includes an increase in the capital of the association.

I hereby certify this to be a true and correct copy of the original on file.  
Filed on this date: 7/23/2003  
Hon. Thornburgh, Secretary of State

State of Kansas, Brown County, SS.  
Filed for record at 8:35 o'clock A.M.  
Recorded Book 901 Page 605  
\$ 20.00 Dated Jan 6, 2000  
Ray Brintall  
REGISTER OF DEEDS  
By Anna Carter Deputy  
Index 1848 Computer Original  
Image SVQ#

BOOK 901  
PAGE 605

2002 Aerial



**Appendix D:**  
**Waste Management Plan**

## **Appendix D: Waste Management Plan**

This appendix presents the environmental protection controls and performance standards enacted to ensure that environmental investigation and remediation activities do not adversely affect public health or the environment. In addition, this section discusses the mechanisms for establishing site-specific controls for each location undergoing response activities.

This section addresses only environmental protection controls and standards, not the numerous controls and standards for protecting the health and safety of site workers and the general public and for assuring the quality and accuracy of data gathered. The latter are discussed in the *Master Work Plan* (Argonne 2002).

### **D.1 The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and Applicable or Relevant and Appropriate Requirements**

The federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA or “Superfund”)<sup>1</sup> is the primary driver for the work addressed at former CCC/USDA facilities. CERCLA authorizes both short-term removal (emergency response) actions and long-term remediation. CERCLA specifies that response and cleanup must assure protection of health and the environment. Further, on-site remedial actions must attain (or receive waivers for) federal environmental applicable or relevant and appropriate requirements (ARARs), more stringent state environmental ARARs, and state facility siting laws.<sup>2</sup>

Compliance with ARARs derived from other environmental laws is a crucial feature of CERCLA. The ARARs identified for each site addressed under CERCLA authority provide cleanup goals and guide response implementation. Factors considered in identifying site-specific ARARs include the chemicals present, the location, the physical features, and the actions under consideration as remedies.

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<sup>1</sup> 42 USC (United States Code) 9601 *et seq.*

<sup>2</sup> Section 121(d).



## **D.2 The National Oil and Hazardous Substances Pollution Contingency Plan and U.S. Environmental Protection Agency Policy**

The 1990 National Oil and Hazardous Substances Pollution Contingency Plan (NCP)<sup>3</sup> extended the requirement for compliance with ARARs to include not only long-term remedial actions, but also more immediate removal actions as practicable (considering the urgency of the situation).<sup>4</sup> The NCP explicitly requires the identification of ARARs only when the response evaluation phase is reached (in the case of remediation activities, during the remedial investigation or feasibility study).<sup>5</sup> As a matter of policy, the EPA has stated that treatment or disposal of investigation-derived wastes produced during response activities must ensure protection of human health and the environment and must, to the extent possible, comply with (or receive waivers for) federal and state ARARs.

## **D.3 Procedure for Identifying Controls and Standards**

In numerous documents, the EPA has published guidance for the identification of site-specific ARARs and the subsequent determination of environmental protection controls and performance standards from the ARARs. For this investigation, federal statutes, executive orders, federal regulations, state laws, state regulations, and local ordinances were all reviewed as potential sources of necessary, reasonable, and prudent controls and standards. State laws and regulations and local ordinances were considered only when they are legally enforceable, consistently enforced, and more stringent than the corresponding federal requirements. In addition to statutes and regulations directed at protection of the environment, state laws and regulations pertaining to the siting of certain facilities were also reviewed.

In general, *applicable requirements* have basic statutory or regulatory jurisdiction, whether an activity is conducted under CERCLA or another authority. The EPA guidance defines applicable requirements as “cleanup standards, standards of control, and other substantive environmental protection requirements, criteria, or limitations promulgated under

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<sup>3</sup> Published in the *Federal Register* on March 8, 1990 (55 FR 8666) and codified in Part 300 of Title 40 of the *Code of Federal Regulations* (40 CFR 300).

<sup>4</sup> See NCP, 40 CFR Section 300.415(j) (55 FR 8666, 8843) and Section 300.435(b)(2) (55 FR 8666, 8852) (March 8, 1990).

<sup>5</sup> 40 CFR 300.430(d)(3).

Federal or State law that specifically address a hazardous substance, pollutant, contaminant, remedial action, location, or other circumstance present at a CERCLA site.” *Relevant and appropriate requirements*, though they are “not ‘applicable’ . . . at a CERCLA site, address problems or situations sufficiently similar . . . that their use is well suited to the particular site.”

Additional standards and controls for response activities derived from guidance or advisories issued by federal or state agencies are not legally binding, but they are defined as requirements *to be considered* in the formal ARAR process. Such standards and controls were reviewed for their usefulness in developing operating procedures or best management practices that assure compliance with federal and state regulations and protection of public health and the environment in conjunction with response activities at former CCC/USDA facilities.

Environmental protection controls and standards are classified as follows:

- **Chemical Specific.** Chemical-specific (or ambient) controls and standards are health-based or risk-based standards issued for specific chemicals or chemical families. The anticipated chemical-specific requirements applicable to the generation, management, and ultimate disposal of wastes derived from site investigations would involve carbon tetrachloride and, at some locations, nitrates. (Even though the nitrate contamination that might be encountered is not attributable to CCC/USDA activities, the presence of such contamination will establish the applicability of nitrate-specific controls in the management and disposal of wastes.)
- **Performance, Design, or Action Specific.** Performance-, design-, or action-specific requirements are applicable to the generation, management, and disposal of wastes associated with planned response activities.
- **Location Specific.** Location-specific restrictions are placed on concentrations of hazardous substances — or the conduct of activities involving those substances — solely because of the special or sensitive nature of the location involved. It is beyond the scope of this document to develop a comprehensive list of location-specific requirements. However, this document directs that a reconnaissance survey of each location be conducted before characterization activities begin. This survey is to identify the presence of environmentally



sensitive areas that could be affected by the investigation and response. Such sensitive areas include faults displaced in Holocene time; 100-yr floodplains; salt dome formations; historic properties; critical habitats upon which endangered or threatened species depend; wetlands; wilderness areas; wildlife refuges; areas immediately adjacent to streams or rivers; areas affecting national, wild, scenic, or recreational rivers; wellhead protection areas; and other sensitive areas as defined by the EPA or state authorities. In addition, the survey is to identify all requirements imposed by federal or state siting statutes and regulations.

The KDHE is the authorized state agency for developing and implementing environmental protection programs.<sup>6</sup> Most Kansas environmental control programs are authorized to operate *in lieu* of their federal counterparts.

The federal and state environmental protection controls and performance standards that are applicable or relevant and appropriate to the activities anticipated at former CCC/USDA facilities are identified and analyzed in Table D.1 (at the end of this appendix).

## **D.4 Implementation of Controls and Standards**

The application of the standards and requirements identified in Table D.1 depends on the chosen techniques for the response action, the specific location where activities will be conducted, and the chemical constituency of the resulting waste at each site. Consequently, the controls ultimately applied will be determined during the response activities at each location.

### **D.4.1 CERCLA Wastes and the Off-Site Rule**

CERCLA wastes are any hazardous substance, pollutant, or contaminant<sup>7</sup> generated in the course of a response action. CERCLA wastes are subject to requirements of the Resource Conservation and Recovery Act (RCRA), Subtitle C, *if* they are listed or identified as hazardous

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<sup>6</sup> Kansas Statutes Annotated (KSA), Chapter 75, Article 56, Statute 75-5601.

<sup>7</sup> Section 121(d)(3).

waste or exhibit a characteristic of hazardous waste. Such wastes may be placed *only* in a facility operating in compliance with RCRA or other applicable federal or state requirements. Furthermore, CERCLA wastes may not be transferred to a land disposal facility that is releasing contaminants into the environment; releases from other waste management units must be controlled. The purpose is to avoid contributions to present or future environmental problems by CERCLA wastes from response actions authorized or funded under CERCLA. Such wastes are therefore directed to management units determined to be environmentally sound.<sup>8</sup>

The Off-Site Rule (OSR)<sup>9</sup> regulates the off-site transfer of CERCLA wastes. The OSR establishes the following:

- Criteria and procedures for determining whether facilities are acceptable for the receipt of CERCLA wastes from response actions authorized or funded under CERCLA.
- Compliance and release criteria, along with a process for determining whether facilities are acceptable on the basis of those criteria.

The OSR applies to any remedial or removal action involving the off-site transfer of CERCLA waste, whether the action is conducted by the EPA, states, private parties, or other federal agencies, if the action is financed through the Superfund or is taken under CERCLA legal authority.

#### **D.4.2 Investigation-Derived Wastes**

Although the investigations conducted at former CCC/USDA facilities are generally minimally intrusive, they do produce small amounts of wastes. Investigation-derived waste (IDW) streams include (1) cuttings from soil borings and well installations, (2) well development fluids, (3) purge water recovered from sampling wells, (4) residuals and quality control duplicates from sample analyses performed both in the field and in off-site laboratories, (5) equipment decontamination rinsates, (6) soiled and potentially contaminated personal

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<sup>8</sup> Preamble to final Off-Site Rule (OSR), 58 FR 49200, 49201, September 22, 1993.

<sup>9</sup> 40 CFR 300.440.

protective equipment, and (7) other miscellaneous wastes associated with well installation and sampling of various environmental media.

Site characterization activities might result in air emissions of particulate matter or other materials from drilling equipment. Therefore, air pollution laws and regulations can be ARARs.

In all instances, investigation-derived wastes are to be managed in a manner consistent with the applicable EPA Office of Solid Waste and Emergency Response directive. In addition, field investigators are to seek site-specific guidance and directives from the appropriate regulatory authorities, including federal, state, and local environmental or public health authorities.

The approach to management of IDWs is as follows:

- Leave a site in a condition no worse than before the project.
- Remove wastes that pose an immediate threat to human health or the environment.
- Keep on-site wastes that do not require off-site disposal or extended aboveground containerization.
- Comply with federal and state ARARs, to the extent practicable.
- Exercise careful planning and coordination for management of project-derived wastes.
- Minimize the quantity of wastes generated.

The approach to handling and disposal of soil and water IDWs is as follows:

- Soil cores collected during sampling will be retained in core boxes for lithologic descriptions and research. The cores will be transported and stored at an Argonne facility.

- Soil IDW from drilling activities will be stored on-site in 55-gal drums or a roll-off dumpster. A representative sample will be collected and analyzed by a KDHE-certified laboratory.
- A Solid Waste Disposal Authorization will be obtained from the KDHE for disposal of soil in a permitted landfill. If analytical data indicate the soils cannot be disposed in a permitted landfill, alternative disposal methods will be proposed to KDHE for review.
- Water IDW will be stored on-site in 55-gal drums or polyurethane containers. If acceptable to KDHE, the wastewater will be aerated prior to sampling. Then the wastewater will be analyzed for VOCs.
- If the analytical results for the wastewater indicate concentrations of carbon tetrachloride or chloroform below the MCLs, then the water will be discharged on-site, away from known sensitive receptors. If the analytical results for the wastewater indicate concentrations above the MCLs, then the water will be disposed of at a wastewater treatment facility approved by KDHE.

TABLE D.1 Potential applicable or relevant and appropriate requirements (ARARs) for former CCC/USDA facilities in Kansas. <sup>a</sup>

Title	Citation <sup>b</sup>	Description	Comment
<i>Federal Laws and Regulations</i>			
Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA)	42 USC 9601 <i>et seq.</i>		
National Oil and Hazardous Substances Pollution Contingency Plan (NCP)	40 CFR Part 300	Provides the federal government's blueprint for responding to both oil spills and hazardous substance releases.	Applicable to releases into the environment of hazardous substances and pollutants or contaminants that may present an imminent and substantial danger to public health or the national welfare.
		Off-Site Rule establishes procedures for planning and implementing off-site response actions (40 CFR 300.440).	Applicable to response actions involving off-site transfers of hazardous substances, pollutants, or contaminants.
Draft Guidance for Evaluating the Vapor Intrusion to Indoor Air Pathway from Groundwater and Soils (Subsurface Vapor Intrusion Guidance)	67 FR 71169 (Nov. 29, 2002)	The draft guidance is intended to be a screening tool to aid users in determining whether a vapor intrusion pathway is complete and, if so, whether the complete pathway poses an unacceptable risk to human health at cleanup sites. With a complete pathway, humans are exposed to vapors originating from site contamination. The draft guidance begins with simple and generally reasonably conservative screening approaches and gradually progresses toward a more complex assessment involving increasingly greater use of site-specific data. For sites determined to have an incomplete vapor intrusion pathway, further consideration of the current site situation generally should not be needed. For sites determined to have a complete pathway, guidance is provided to evaluate whether the pathway does or does not pose a potential significant risk to human health. The draft guidance is not intended to provide recommendations to delineate the extent of risk or eliminate the risk.	Suggested for use at National Priorities List and Superfund Alternative Sites.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Safe Drinking Water Act (SDWA) (Public Health Service Act)	42 USC 300(f) <i>et seq.</i>		
National Primary Drinking Water Standards	40 CFR Part 141, Subparts B and G	Establishes maximum contaminant levels (MCLs), which are health-based standards for public water systems. The MCL for carbon tetrachloride is 5 µg/L. The MCL for chloroform (total trihalomethanes) is 100 µg/L.	Applicable to organic groundwater contamination in a sole-source aquifer.
National Secondary Drinking Water Regulations (NSDWRs)	40 CFR Part 143	Establishes secondary maximum contaminant levels (SMCLs) for public water systems to protect the aesthetic quality of the water. The SMCLs are not federally enforceable but are included as guidelines for the states.	Applicable if groundwater is a source of drinking water and if the NSDWRs have been adopted as enforceable standards by the state.
Maximum Contaminant Level Goals (MCLGs)	40 CFR Part 141, Subpart F	Establishes non-enforceable drinking water quality goals at levels of no known or anticipated adverse health effects, with an adequate margin of safety. The MCLG for carbon tetrachloride is zero.	May be relevant and appropriate if a more stringent standard is required to protect human health and the environment.
Standards for Owners and Operators of Public Water Supply Systems	40 CFR Part 141	Provides treatment requirements for public water supply systems (i.e., systems that serve at least 25 people or have at least 15 connections).	Relevant and appropriate in the establishment of cleanup goals for groundwater contamination.
Underground Injection Control Regulations	40 CFR Parts 144–148	Provides for protection of underground sources of drinking water.	Applicable if a response alternative involves underground injection.
Sole-Source Aquifers	40 CFR Part 149	Prohibits activities, including drilling, in an area designated a sole-source aquifer without special permission of the U.S. Environmental Protection Agency (EPA).	Applicable if the aquifer in the area is a sole-source aquifer.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Clean Water Act (Federal Water Pollution Control Act)	33 USC 1251 <i>et seq.</i>		
Ambient Water Quality Criteria	40 CFR Part 131	Section 304(a) of the Clean Water Act (CWA) requires the EPA to publish and periodically update ambient water quality criteria (AWQCs). These criteria are to “. . . accurately reflect . . . the latest scientific knowledge . . . on the kind and extent of all identifiable effects on health and welfare including, but not limited to, plankton, fish, shellfish, wildlife, plant life . . . which may be expected from the presence of pollutants in any body of water. . . .” Water quality criteria developed under Section 304(a) are based solely on data and scientific judgments on the relationship between pollutant concentrations and environmental and human health effects. These recommended criteria provide guidance for states and tribes in adopting water quality standards under Section 303(c) of the CWA.	Developed for some organic constituents in groundwater; may be relevant and appropriate.
National Pollutant Discharge Elimination System (NPDES)	40 CFR Parts 122, 124, and 125	Establishes NPDES permit procedures, criteria, and standards governing the discharge of pollutants from any point source into waters of the United States (Sections 318, 402, and 405 of the CWA). Most storm water discharges require coverage by an NPDES permit.	Discharge limits will be established if effluent is discharged to a surface water body.  No permit is required for on-site response actions under CERCLA, but the substantive requirements apply if a response alternative involves discharge into a creek or other surface water on-site. A permit is required if the discharge is to a creek or other surface water off-site.



TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Clean Water Act (cont.)			
Water Quality Standards	40 CFR Part 131	Forms the foundation of the water-quality-based pollution control program mandated by the CWA. These standards define the goals for a water body by designating the water body's uses, setting criteria to protect those uses, and establishing provisions to protect water bodies from pollutants.	Applicable to surface water discharges.
National Pretreatment Standards	40 CFR Part 403	Provides general pretreatment standards and regulations for existing and new sources of pollution; establishes standards to control pollutants that pass through or interfere with treatment processes in publicly owned treatment works (POTW) or that may contaminate sewage sludge.	Applicable if a response alternative involves discharge to publicly owned treatment works.
Dredge or Fill Requirements	40 CFR Parts 230–233 (40 CFR Part 6.302(a))	Requires permits for discharge of dredged or fill material into navigable waters.	Applicable if a response alternative requires discharge of dredged or fill material into navigable waters.
Executive Order on Protection of Wetlands	Executive Order 11,990	Requires federal agencies to avoid, to the extent possible, adverse impacts associated with the destruction or loss of wetlands and to avoid support of new construction in wetlands if a practicable alternative exists.	Applicable if a response alternative has a negative effect on a wetland.
Rivers and Harbors Act of 1899			
Section 10 Permit	33 USC 401 <i>et seq.</i> 33 CFR Parts 320–330 (40 CFR Part 6.302(a))	Requires permit for structures for work in or affecting navigable waters.	Applicable if a response alternative affects a navigable waterway.
Executive Order on Floodplain Management	Executive Order No. 11,988	Requires federal agencies to evaluate the potential effects of actions in a floodplain to avoid, to the extent possible, the adverse impacts associated with direct and indirect development of a floodplain.	Applicable if activities are located in a 100-yr floodplain.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Clean Air Act	42 USC 7401 <i>et seq.</i>		
National Primary and Secondary Ambient Air Quality Standards	40 CFR Part 50	Establishes national primary and secondary ambient air quality standards under Section 109 of the Clean Air Act to protect public health and welfare.	Applicable if contaminants are discharged to the air during treatment.
National Emissions Standards for Hazardous Air Pollutants (NESHAPs)	40 CFR Parts 61 and 63	Implements Section 112 of the Clean Air Act, which governs the federal control program for hazardous air pollutants (HAPs). Identifies emission standards for HAPs that originate from specific categories of sources, including site remediation. NESHAPs are technology based and are issued to limit the release of specified HAPs from specific industrial sectors. A <i>Federal Register</i> notice published for carbon tetrachloride (50 FR 32621 [August 13, 1985]) and chloroform (50 FR 39626 [September 27, 1985]) included consideration of serious health effects, such as cancer, due to ambient exposures.	Applicable if the identified HAPs are emitted from a specific source category (for example, if on-site treatment units with emissions are part of response actions).
Solid Waste Disposal Act (as amended by the Resource Conservation and Recovery Act [RCRA])	40 USC 6901 <i>et seq.</i>		
Criteria for Classification of Solid Waste Disposal Facilities and Practices	40 CFR Part 257	Establishes classification criteria for sanitary landfills and open dumps, which are prohibited (Sections 4005 and 1008 of RCRA). At a minimum, facilities meet the sanitary landfill classification "only if there is no reasonable probability of adverse effects on health or the environment . . ." [Section 4004(a) of RCRA].	Applicable if a response alternative involves land disposal of solid waste.
		Provides for protection of surface water and groundwater at solid waste disposal facilities (40 CFR 257.3-3 and -4).	Applicable if a response action includes provisions for an on-site landfill.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Solid Waste Disposal Act (cont.)			
Criteria for Municipal Solid Waste Landfills	40 CFR Part 258	Establishes minimum national criteria for municipal solid waste landfill units.	Applicable if municipal solid waste is placed in a municipal solid waste landfill.
Identification and Listing of Hazardous Wastes	40 CFR Part 261	Identifies solid wastes that are subject to regulation as hazardous wastes under 40 CFR Parts 124, 262-265, 268, 270, and 271.	Applicable if a material at the site is defined as a solid and hazardous waste; requires handling as a hazardous waste.
Standards Applicable to Generators of Hazardous Waste	40 CFR Part 262	Establishes standards for generators of hazardous waste.	Applicable if hazardous wastes are generated as a result of on-site activities.
Standards Applicable to Transporters of Hazardous Waste	40 CFR Part 263	Establishes standards that apply to transporters of hazardous waste within the United States if the transportation requires a manifest under 40 CFR Part 262.	Applicable if a response alternative involves off-site transportation of hazardous wastes.
Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities	40 CFR Part 264	Establishes minimum national standards that define the acceptable management of hazardous wastes for owners and operators of facilities that treat, store, or dispose of hazardous waste.	Applicable or relevant and appropriate if hazardous waste is disposed of on-site.
		Provides for groundwater protection standards, general monitoring requirements, corrective action requirements, and technical requirements.	RCRA standards can be relevant and appropriate for groundwater at a site if an on-site landfill is constructed.
Standards for Management of Specific Hazardous Wastes and Specific Types of Hazardous Waste Management Facilities	40 CFR Part 266	Establishes requirements that apply to recyclable materials.	No substances are expected to be present at CCC/USDA sites in quantities to warrant recycling.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Solid Waste Disposal Act (cont.)			
Land Disposal Restrictions	40 CFR Part 268	Identifies hazardous wastes that are restricted from land disposal; defines limited circumstances under which an otherwise prohibited waste may continue to be land disposed.	Applicable or relevant and appropriate if hazardous waste are disposed of on-site.
Hazardous Waste Permit Program	40 CFR Part 270	Establishes provisions covering basic EPA permitting requirements.	No permit is required for on-site CERCLA response actions. Substantive requirements are addressed in 40 CFR Part 264.
Universal Wastes	40 CFR Part 273	Establishes requirements governing universal wastes (hazardous waste batteries, hazardous waste pesticides that are either recalled or collected in waste pesticide collection programs, hazardous waste thermostats, and hazardous waste lamps).	Applicable if universal wastes are generated or managed on-site in the course of investigation or response operations.
Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks	40 CFR Part 280	Establishes regulations related to underground storage tanks.	Applicable if a response alternative involves use of underground storage tanks.
Occupational Safety and Health Act (OSHA)	29 USC 651 <i>et seq.</i>		
Occupational Safety and Health Standards	29 CFR Part 1910	Establishes safety and health standards for workers. OSHA has set a limit of 100 ppm for carbon tetrachloride in workplace air for an 8-hr work day, 40-hr work week.	Under 40 CFR Section 300.150, response actions under the NCP will comply with OSHA requirements for the safety and health of response action workers.
Noise Control Act of 1972	42 USC Sect. 4901 <i>et seq.</i>	Prohibits federal activities resulting in noise that would jeopardize the health or welfare of public.	Applicable for activities such as drilling near a public access point.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Hazardous Materials Transportation Act	49 USC 5101 <i>et seq.</i>		
Hazardous Materials Transportation Regulations	49 CFR Parts 106–180	Protects against the risks to life and property inherent in the transportation of hazardous material by listing the materials deemed hazardous and describing required labeling, placarding, and training. Hazardous materials are chemicals that the U.S. Department of Transportation has determined pose unreasonable risks to health, safety, and property during transportation activities.	Applicable if an alternative involves transportation of hazardous materials. Does not apply to on-site response operations.
National Historic Preservation Act	16 USC 470 <i>et seq.</i>	Requires (Section 106) federal agencies to consider the effects of any federally assisted undertaking (including those carried out with federal financial assistance and those requiring a federal permit, license, or approval) on any district, site, building, structure, or object that is listed in the National Register of Historic Places or eligible for such listing; requires agencies to give the Advisory Council on Historic Preservation a reasonable opportunity to comment on those undertakings.	
Protection of Historic Properties	36 CFR Parts 800 (40 CFR 6.301(b))	Defines how federal agencies meet the statutory responsibilities.	Applicable if a district, site, building, structure, or object listed on or eligible for the National Register is on or adjacent to the site.
Executive Order on Protection and Enhancement of Cultural Environments	Executive Order 11,593	Requires federal agencies to preserve, restore, and maintain the nation's historic and cultural environment in their activities.	
Executive Order on Preserve America	Executive Order 13,287	Formulates policy to promote intergovernmental cooperation and partnerships for the preservation and use of historic properties.	

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Historic Sites, Buildings and Antiquities Act (Historic Sites Act)	16 USC 461 <i>et seq.</i> (40 CFR 6.301(a))	Establishes a national policy to preserve historic sites and objects of national significance, including those located on refuges. Provides procedures for designation, acquisition, administration, and protection of such sites. Requires federal agencies to consider the existence and location of landmarks on the National Registry of Natural Landmarks and avoid undesirable impacts to such landmarks.	Applicable if an entity on the National Register of National Landmarks is on or adjacent to the site.
Archaeological and Historic Preservation Act	16 USC 469 <i>et seq.</i> (40 CFR 6.301(c))	Carries out policy established by the Historic Sites Act. Establishes procedures for preservation of historical and archaeological data that might be lost or destroyed through alteration of terrain as a result of a federal construction project or a federally licensed activity or program. Directs federal agencies to notify the Secretary of the Interior whenever they find that a federal or federally assisted, licensed, or permitted project may cause loss or destruction of significant scientific, prehistoric, or archaeological data.	Applicable if historical or archaeological data are on or adjacent to the site and if construction projects or alteration of terrain at the site could destroy historical or archaeological materials.
Antiquities Act	16 USC 431 <i>et seq.</i>	Authorizes the President to designate as national monuments objects or areas of historic or scientific interest on lands owned or controlled by the United States. Requires a permit for examination of ruins, excavation of archaeological sites, and the gathering of objects of antiquity on lands under the jurisdiction of the Secretaries of Interior, Agriculture, and Army. Provides penalties for violations.	
Preservation of American Antiquities	43 CFR 3 (40 CFR Sect. 6.301(b)) Executive Order 11,593	Protects all historic and prehistoric sites on federal lands and prohibits excavation or destruction of such antiquities without the permission (Antiquities Permit) of the secretary of the department that has the jurisdiction over those lands; authorizes the President to declare areas of public lands as national monuments and to reserve or accept private lands for that purpose.	Applicable if site operations affect antiquities on federal lands.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Archaeological Resources Protection Act	16 USC 470aa <i>et seq.</i>	Supplements the provisions of the Antiquities Act of 1906. Establishes detailed requirements for issuance of permits for any excavation for or removal of archaeological resources from federal or Indian lands. Also established civil and criminal penalties for the unauthorized excavation, removal, or damage of such resources.	
Protection of Archaeological Resources	43 CFR Part 7, 36 CFR Part 296 (40 CFR 6.301(b))	Establishes uniform definitions, standards, and procedures to be followed by all federal land managers in providing protection for archaeological resources located on public lands and Indian lands.	Applicable if site operations affect archaeological resources on public or Indian lands.
American Indian Religious Freedom Act	42 USC 1996 <i>et seq.</i>	Protects and preserves the right of American Indians to have access to their sacred places; directs federal agencies to consult with Indian religious practitioners if a place of religious importance to American Indians may be affected by an undertaking.	Applicable if site operations affect access to sacred Indian sites.
Executive Order on Indian Sacred Sites	Executive Order 13,007	Requires agencies managing federal lands to accommodate access to and ceremonial use of Indian sacred sites by Indian religious practitioners and to avoid adversely affecting the physical integrity of such sacred sites; also requires agencies to develop procedures for reasonable notification of proposed actions.	Applicable if site operations affect access to sacred Indian sites.
Native American Grave Protection and Repatriation Act	25 USC 3001 <i>et seq.</i>	Establishes the priority for ownership or control of Native American cultural items excavated or discovered on federal or tribal lands after 1990 and the procedures for repatriation of items in federal possession; allows the intentional removal or excavation of Native American cultural items from federal or tribal lands only with a permit or upon consultation with the appropriate tribe.	Applicable if site operations involve excavation or discovery of Native American cultural items on federal or tribal lands.



TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Native American Grave Protection and Repatriation Act (cont.)			
Native American Graves Protection and Repatriation Regulations	43 CFR Part 10	Develops a systematic process for determining the rights of linear descendants and Indian tribes to certain Native American human remains, funerary objects, sacred objects, or objects of cultural patrimony. Defines items included under the Native American Grave Protection and Repatriation Act. Describes the consultation procedure applicable to intentional excavation or inadvertent discovery of remains or objects covered.	
Endangered Species Act	16 USC 1531 <i>et seq.</i>	Provides for the conservation of threatened and endangered plants and animals and the habitats in which they are found.	
Interagency Cooperation	50 CFR Part 402 (40 CFR 6.302(h))	Requires action to conserve threatened and endangered species within critical habits upon which endangered species depend, including consultation and conferencing with the Department of the Interior (U.S. Fisheries and Wildlife Service/U.S. National Marine Fisheries Service).	Applicable if threatened or endangered species or critical habitats are identified at the site.
Migratory Bird Treaty Act	16 USC 703 <i>et seq.</i>		
Migratory Bird Permits	50 CFR Parts 10 and 21	Requires a permit from the U.S. Fisheries and Wildlife Service for the taking of protected migratory birds.	Applicable if a response alternative will affect a migratory pathway.
Executive Order on Responsibilities of Federal Agencies to Protect Migratory Birds	Executive Order 13,186	Directs federal agencies taking actions having or likely to have a negative effect on migratory bird populations to work with the U.S. Fisheries and Wildlife Service to develop an agreement to conserve those birds.	

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Bald and Golden Eagle Protection Act	16 USC 668 <i>et seq.</i>		
Eagle Permits	50 CFR Parts 10 and 22	Requires a permit from the U.S. Fisheries and Wildlife Service to move nests because of construction or operation of project facilities.	Applicable if project activities affect bald and golden eagle populations, including construction or operation of facilities that call for the moving of nests.
Fish and Wildlife Conservation Act	16 USC 2901 <i>et seq.</i>	Encourages states to develop conservation plans for nongame fish and wildlife of ecological, educational, aesthetic, cultural, recreational, economic, or scientific value.	Applicable if significant populations are present at a site or are affected by site response activities.
Fish and Wildlife Coordination Act	16 USC 661 <i>et seq.</i> (40 CFR 6.302(g))	Requires consultation with the U.S. Fish and Wildlife Service when a federal department or agency proposes, authorizes, permits, or licenses any modification of any stream or other water body. Requires adequate provision for protection of fish and wildlife resources.	Applicable if a response alternative will cause damage to or loss of wildlife by modifying a stream or body of water.
Wilderness Act	16 USC 1311 <i>et seq.</i>		
Wilderness Preservation and Management	50 CFR Part 35, 43 CFR Part 6300	Describes the activities allowed and banned in wilderness areas and uses requiring authorization.	Applicable if a wilderness area exists on-site or adjacent to the site.
National Wildlife Refuge System Administration Act	16 USC 668dd		
Executive Order on the Management and General Public Use of the National Wildlife Refuge System	Executive Order 12,996	Directs preservation of a national network of lands and waters for the conservation and management of fish, wildlife, and plant resources for the benefit of present and future generations. Recognizes compatible uses, while ensuring maintenance of biological integrity and environmental health.	Applicable if a wildlife refuge area exists on-site or adjacent to the site.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Wild and Scenic Rivers Act	16 USC 1271 <i>et seq.</i>	States that a federal agency may not assist, through grant, loan, license, or otherwise, the construction of a water resources project that would have a direct and adverse effect on the values for which a river in the National Wild and Scenic Rivers System or a study river on the National Rivers Inventory was established (as determined by the Secretary of the Interior for rivers under the jurisdiction of the Department of the Interior and by the Secretary of Agriculture for rivers under the jurisdiction of the Department of Agriculture).	
Wild and Scenic Rivers	36 CFR Part 297 (40 CFR 6.302(e))	Requires a notification process for federally assisted water resource projects in any portion of a designated river.	Applicable to on-site water resource projects located within, above, below, or outside a wild and scenic river or study river.
<i>Kansas State Laws</i>			
Kansas Voluntary Cleanup and Property Redevelopment Program	KSA, Chapter 65, Article 34, Sections 164 <i>et seq.</i> KAR, Title 28, Article 71	Applies to low- to medium-priority contaminated sites with minimal risk. Provides a mechanism for stakeholders (e.g., property owners, facility operators) cleaning up such sites to receive a “no further action” determination from the Kansas Department of Health and Environment (KDHE) (KAR 28-71-10). The KDHE is working with the EPA to develop a Memorandum of Agreement providing voluntary participants with assurance of relief from future federal liability for the voluntary party’s property.  Identifies remedial standards for cleanup of environmental media (KAR 28-71-11). Provides that groundwater cleanup levels will be based on the most beneficial use of the groundwater [KAR 28-71-11(l)].	According to the KDHE, the program is truly voluntary and is designed for stakeholders to properly address contamination on eligible properties through private-state partnerships. No additional burdens or requirements are placed on voluntary participants.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Environmental Use Control	KSA, Chapter 65, Article 1, Sections 1,221 <i>et seq.</i> KAR, Title 28, Article 73	<p>Provides a way for landowners to achieve site closure by addressing environmental concerns caused by residual contamination.</p> <p>An <i>environmental use control</i> is a restriction or prohibition of uses of or activities on a specific property, as requested by the property owner, to ensure future protection of public health and the environment when environmental contamination exceeding standards for unrestricted use remains on the property following appropriate assessment and/or remedial activities [KSA, 65-1,222(b)]. Eligible property is real property that exhibits environmental contamination exceeding standards for unrestricted use and is being or has been investigated or remediated, or both, in an approved program [KAR 28-73-1(c)].</p> <p>Governs environmental use control agreements (KAR 28-73-3); long-term care agreements for properties that cover a large acreage, exhibit residual contamination characterized by higher toxicity or mobility, require complicated maintenance or monitoring of protective structures, and require frequent or complicated site inspections (KAR 28-73-4); financial assurance for such properties (KAR 28-73-5); duration of environmental controls (KAR 28-73-6); and restrictions, prohibitions, and zoning in lieu of environmental use controls (KAR 28-73-7).</p>	An environmental use control can be applied voluntarily to a property by the landowner to assure adequate protection of public health and the environment from contamination on the subject property. The protection offered can give a landowner relief from environmental liability concerns, making property more attractive to redevelopment or prospective buyers.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Kansas Air Quality Control Act; Kansas Air Quality Regulations	KSA, Chapter 65, Article 30; KAR, Title 28, Article 19	<p>Requires permitting and preconstruction notice for air contaminant sources. Provides for reporting and inspections. Establishes state emission standards for listed HAPs and state air quality standards to protect the public health.</p> <p>Provides emission standards for HAPs (KAR 28-19-200 <i>et seq.</i>), including carbon tetrachloride and chloroform [KAR 28-19-201(a)]. Emission above a certain threshold requires an annual emissions fee (e.g., 10 tons/yr of a single HAP and 25 tons/yr of any combination of HAPs) (KAR 28-19-202).</p> <p>Emissions above certain threshold amounts require a construction permit (e.g., 25 tons/yr of particulate matter [PM], 15 tons/yr of PM 10, 100 tons/yr of carbon monoxide, 40 tons/yr of volatile organic compounds [VOCs]) or a preconstruction approval (e.g., 5 lb/hr of PM, 2 lb/hr of PM 10, 50 lb per 24-hr period of carbon monoxide, 50 lb per 24-hr period of VOCs (either 15 lb per 24-hr period or 3 lb/hr in a nonattainment area) (KAR 28-19-300).</p> <p>Requires operating permits for certain stationary sources (28-19-500 <i>et seq.</i>).</p> <p>Prohibits open burning (28-19-645 <i>et seq.</i>).</p> <p>Establishes new source performance standards for municipal solid waste landfills, including reporting, calculation of nonmethane organic compound emissions, installation of collection and control systems (28-19-720 <i>et seq.</i>).</p> <p>Establishes emission standards for major source HAPs (28-19-750 <i>et seq.</i>).</p>	Applicable if any listed pollutants are discharged to the air during investigation or response through air stripping, thermal destruction, handling of contaminated soil, gaseous waste treatment, aeration, or disposal in a municipal solid waste landfill.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Underground Storage, Disposal Wells, and Surface Ponds	KSA, Chapter 65, Article 1; KAR, Title 28, Article 13	Regulates the construction and use of underground storage reservoirs, disposal wells, and surface ponds for the confinement, storage, and disposal of industrial fluids. Establishes approval and permitting requirements.	Applicable if a response alternative requires underground storage reservoirs, disposal wells, or surface ponds.
Drinking Water Regulations	KSA, Chapter 65, Article 33; KAR, Title 28, Article 15a	Establishes primary drinking water regulations. Adopts federal MCLs pertaining to public water supplies.	Applicable if waste derived from investigation or response enters public water systems. Not applicable to investigative wells that are not used for drinking water supply; however, relevant and appropriate for establishing sampling and analysis parameters during an investigation.
Water Pollution Control Regulations	KSA, Chapter 65, Article 33; KAR, Title 28, Article 16	Provides for the maintenance and protection of public health and welfare and the use of surface water for aquatic life; for agricultural, domestic, and industrial water supply; and for recreation. Controls surface water use designation. Establishes surface water quality standards (KAR 28-16-28 <i>et seq.</i> ). Maximum contaminant level is defined as any of the enforceable standards for drinking water promulgated by the EPA [KAR 28-16-28b(aa)].  When the KDHE finds that the criteria are underprotective or overprotective for a given surface water segment, the KDHE may, in accordance with KAR 28-16-28(f), make appropriate site-specific determinations (KAR 28-16-28e(a)). Surface water must be free from the harmful effects of substances that produce any public health hazard; hazardous substances must not occur in surface water at concentrations that jeopardize public health and other protected life [KAR 28-16-28e(b)].	Applicable if contaminated effluent from an investigative or response operation is discharged into surface water; also might be applicable to alluvial aquifers demonstrated to be hydraulically connected to surface water bodies.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Water Pollution Control Regulations (cont.)		<p>Provides numeric criteria by use category for different parameters [KAR 28-16-28e(d)]. For chloroform the values are 28,900 µg/L for aquatic life-acute, 1,240 µg/L for aquatic life-chronic, 15.7 µg/L for public health-food procurement, and 100 µg/L for public health-domestic water supply. (No values are specified for agriculture-livestock and agriculture-irrigation.) For carbon tetrachloride the values are 35,200 µg/L for aquatic life-acute, 6.94 µg/L for public health-food procurement, and 5 µg/L for public health-domestic water supply. (No values are specified for aquatic life-chronic, agriculture-livestock, and agriculture-irrigation.)</p> <p>Establishes procedures relating to the discharge of wastewaters under the NPDES program (KAR 28-16-57 <i>et seq.</i>). National effluent standards are adopted by reference.</p> <p>Requires water management planning for water quality management areas deemed critical by state authorities (KAR 28-16-69 <i>et seq.</i>).</p> <p>Establishes limitations on the types of wastes that can be discharged to a POTW and governs pollutants from nondomestic sources that are subject to one or more pretreatment standards and that are indirectly discharged, or otherwise introduced by any means, into any POTW (KAR 28-16-83 <i>et seq.</i>).</p>	<p>Applicable if investigation or response operations involve discharge into "waters of the state."</p> <p>Applicable if contaminants resulting from investigation or response are discharged into a water quality management area.</p> <p>Applicable if investigation or response alternatives involve discharge of contaminated groundwater to a POTW.</p>
Kansas Water Well Contractor's License Regulations; Water Well Construction and Abandonment Regulations	KSA, Chapter 82a, Article 12; KAR, Title 28, Article 30	Establishes requirements for licensing of well drillers and standards for construction, operation, and plugging of wells (KAR 28-30-3 <i>et seq.</i> ).	Applicable if investigation or response involves drilling of monitoring wells or other wells.
Kansas Water Appropriation Act; Kansas Water Appropriation Act Rules	KSA, Chapter 82a, Sections 701 <i>et seq.</i> KAR, Title 5, Articles 1 <i>et seq.</i>	Establishes requirements for obtaining, maintaining, and transferring water appropriations.	Applicable if water appropriations are required for groundwater remediation.



TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Underground Injection Control Regulations	KSA, Chapter 65, Article 1; KAR, Title 28, Article 46	Governs discharges into underground injection wells (KAR 28-46-1 <i>et seq.</i> ). In general, federal SDWA regulations are adopted by reference.	Applicable if investigative or response wastes are introduced into wells for discharge or disposal.
Solid Waste Regulations	KSA, Chapter 65, Article 34; KAR, Title 28, Article 29	Establishes standards for management activities and facilities relative to solid wastes (KAR 28-29-21 <i>et seq.</i> ).	Applicable if nonhazardous materials discarded as a result of the investigation or response are landfilled on-site.
		Establishes location restrictions, design standards, operating standards, groundwater monitoring, corrective action, and financial assurance for closure and postclosure, for municipal solid waste landfill units (KAR 28-29-100 <i>et seq.</i> ). Liners for new municipal solid waste landfills must be designed in accordance with KAR 28-19-104(e)(1)(A) or (B). Alternative designs must demonstrate that a carbon tetrachloride concentration of 0.005 mg/L will not be exceeded [KAR 28-29-104(e)(1)(B)]. (Small units may request exemption [KAR 28-19-103].) Requires detection and assessment monitoring for carbon tetrachloride and chloroform (KAR 28-29-113).	Applicable if a municipal solid waste landfill is used.
Hazardous Waste Management Standards and Regulations	KSA, Chapter 65, Article 34; KAR, Title 28, Article 31	Requires generators of solid waste to make a hazardous waste determination. For a waste that is not excluded from hazardous waste regulations and not listed as a hazardous waste, the determination is generally made through testing by a laboratory certified by the KDHE for such analyses [KAR 28-31-4(b)].	Applicable if investigation or response operations generate solid wastes.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Hazardous Waste Management Standards and Regulations (cont.)		Establishes standards for hazardous waste generators and transporters and for storage, treatment, and disposal facilities (KAR 28-31-4 <i>et seq.</i> ). Storage by certain hazardous waste generators for more than 90 days requires a permit [KAR 28-31-4(g)]. Adopts by reference federal land disposal restrictions (KAR 28-31-14).	Applicable to investigation samples or response-generated wastes that are determined to be hazardous and are transported or managed on-site through treatment, storage, and disposal. Transportation requirements do not include a manifesting requirement for samples sent for characterization.
		Adopts by reference federal regulations governing universal wastes (KAR 28-31-15).	Applicable if universal wastes are generated or managed on-site in the course of investigation or response operations.
Kansas Storage Tanks Act	KSA Chapter 65, Article 34	Governs storage tanks.	Applicable if a response alternative involves use of storage tanks to contain an accumulation of regulated substances; applies to associated piping, ancillary equipment, and the containment system.
Kansas State Board of Technical Professions	KSA, Chapter 74, Article 70 KAR, Title 66, Number 66-6-1 through Number 66-14-12	Establishes requirements for licensing of engineers, land surveyors, geologists, and others.	Applicable if the services of engineers, land surveyors, and geologists are required for site investigation and response activities.
Kansas Nongame and Endangered Species Conservation Act; Kansas Nongame and Endangered Species Conservation Regulations	KSA, Chapter 32, Article 9; KAR, Title 115, Article 15	Designates endangered and threatened species, as well as nongame species in need of conservation. Requires consultation with the Kansas Department of Wildlife and Parks regarding actions that might affect listed species and their critical habitats. Any projects that affect listed species or their habitat and that are publicly funded, are state or federally assisted, or require a permit from another state or federal agency require review and action permits (KSA 32-957 through 32-963, 32-1009 through 32-1012, 32-1033; KAR 115-15-1, -2, -3, and -4).	Applicable if threatened or endangered species are identified at or near the site.

TABLE D.1 (cont.)

Title	Citation <sup>b</sup>	Description	Comment
Kansas Levee Law	KSA, Chapter 24, Article 1; KAR, Title 5, Article 45	Requires prior approval of chief engineer before construction of floodplain fills and levees (KSA 24-126).  <i>Floodplain fill</i> is material, usually soil, rock, or rubble, placed in a floodplain to an average height of more than 1 ft above the existing ground, which has the effect of diverting, restricting, or raising the level of floodwaters of a stream (KAR 5-45-1).	Applicable if site activities involve construction of floodplain fills.
Kansas Historic Preservation Act	KSA, Chapter 75, Article 27; KAR, Title 118, Article 3	Provides for protection and preservation of sites and buildings listed on state or federal historic registries (KSA 75-2715 through 75-2726; KAR 118-3-1 through 118-3-16).	Applicable if the investigation or response site is a listed state or federal historic site or is adjacent to such a site and if activities requiring permitting are initiated.
Kansas Unmarked Burial Sites Preservation Act	KSA Chapter 75, Article 27; KAR Title 126, Article 1	Establishes Burial Sites Preservation Board. Prohibits unauthorized disturbance. Requires permits for excavation of any unmarked burial site, registered or unregistered (KSA 75-2741 through 75-2754; KAR 126-1-1 through 126-1-2).	Applicable if investigation or remediation activities encounter a burial site.

TABLE D.1 Footnotes (cont.)

<sup>a</sup> In addition to the ARARs listed here, the following advisory levels are to be considered:

- EPA Health Advisories (2004 Edition)

<u>Exposure</u>	<u>Carbon Tetrachloride</u>	<u>Chloroform</u>
One day (mg/L) (10-kg child)	4.0	4.0
Ten days (mg/L) (10-kg child)	0.2	4.0
Reference dose (mg/kg day)	0.0007	0.01
Drinking water equivalent level (mg/L)	0.03	0.4
Lifetime (mg/L) (70-kg adult)	Not available	0.7

- EPA Region III Risk-Based Concentration Table (2006 Update)  
(carcinogenic effects)

	<u>Carbon Tetrachloride</u>	<u>Chloroform</u>
Tap water (µg/L)	1.6E-01	1.5E-01
Ambient air (µg/m <sup>3</sup> )	1.2E-01	7.7E-02
Fish (mg/kg)	2.4E-02	1.4E+01
Soil, industrial (mg/kg)	2.2E+01	1.0E+04
Soil, residential (mg/kg)	4.9E+00	7.8E+02

<sup>b</sup> Abbreviations for citations:

CFR, Code of Federal Regulations  
FR, Federal Register  
KAR, Kansas Administrative Regulations  
KSA, Kansas Statutes Annotated  
Sect., Section  
USC, United States Code



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